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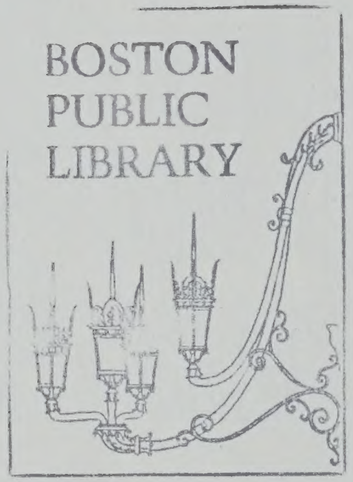

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The Travelers/ New England Telephone Building

Site Analysis

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The Travelers/New England Telephone Building Site Analysis

Prepared for:

The Boston Redevelopment Authority

Prepared by:

The Prospect Company and Spaulding & Slye Company	Developers
Jung/Brannen Associates, Inc.	Architects & Planners
Vanasse/Hangen Associates, Inc.	Transportation Engineers & Planners
HMM Associates, Inc.	Environmental Consultants
Haley & Aldrich, Inc.	Geotechnical Engineers & Geologists
Gunter Engineering	Survey Consultant

30 August 1985

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Section I
Development Program

Section I: Development Program

Introduction

The Project

The Project is a first-class office development consisting of 1.6 million square feet situated on one square block bounded by High Steet, Oliver Street, Purchase Street and Pearl Street in Boston.

The Project is to be developed in two phases. Phase I will be a 900,000 square foot office tower, 500,000 square feet of which will be occupied by New England Telephone and Telegraph Company. It is anticipated that much of the remaining 400,000 square feet will be occupied by tenants currently located in the existing Travelers building. Phase II of 700,000 square feet will be situated on the land occupied by the existing Travelers building. The project will feature street level retail uses and will provide a total of approximately 800 parking spaces.

	Phase I	Phase II	Total
New England Telephone SF	500,000*	0	500,000
Speculative/Existing Tenants SF	400,000**	700,000	1,100,000
Total SF	900,000	700,000	1,600,000
Parking Spaces	400	400	800

* 25,000 S.F. Floors

** 20,000 S.F. Floors

The Site

The city block upon which the Project is to be built is comprised of 108,677 square feet. The Travelers Corporation owns 88,245 square feet. The remaining 20,432 square feet is owned in two parcels by the City of Boston, 19,069 s.f. of which is currently occupied by the fire station.

-Phase I of the Project will require approximately 60% of the block. In order to retain the Travelers. building while Phase I of the project is being constructed, it will be necessary to rebuild the existing fire house elewhere on the site. This will permit the most efficient utilization of the site and allow for the floor plate sizes necessary for New England Telephone and other tenants, while providing the City of Boston with a modern fire house facility.

Site Area Tabulation

Location/Property	Area in Square Feet
The Travelers	88,245.00
Fire Station - City of Boston	19,069.27
Parking Lot - City of Boston	1,362.89
Total Available Project Area	108,677.00

The Development Team

Phase I of the Project is to be owned by a partnership comprised of The Prospect Company and spaulding & Slye Company, as co-developers, and New England Telephone and Telegraph Company, as principal tenant.

The Prospect Company ("Prospect"), a national developer of commercial real estate, is a wholly-owned non-insurance subsidiary of The Travelers Corporation with extensive office and hotel projects currently under development throughout the country. The contact at Prospect is Brian K. Gabriel, Director, The Prospect Company, One Tower Square, Hartford, CT 06183, telephone 203-277-9584.

Spaulding and Slye Company ("Spaulding & Slye") is an investment builder, broker, and manager of commercial real estate operating in seven states through four regional offices. The contact at Spaulding & Slye and local contact for the Project is Peter M. Small, President, Spaulding & Slye Company, 6 New England Executive Park, Burlington, MA 01803, telephone 617-523-8000.

Jung/Brannen Associates, Inc. will be architects for this Project. As a long standing architectural firm in Boston, Jung/Brannen has designed a number of significant projects such as One Post Office Square/ Meridien Hotel, One Financial Center and the recent renovations of John Hancock's Clarendon Building and the landmarked United Shoe Machine Building. The contact at Jung/ Brannen for the project is Yu Sing Jung, President, 177 Milk Street, Boston, MA 02109, Tel. 617-482-2299.

Consolidation
mostly from
8 other locations
eg Prov. etc.
not Long Wharf

Principal Tenant Requirements

New England Telephone and Telegraph Co. ("New England Telephone"), as an owner-occupant of the Project, will be consolidating several locations and bringing approximately 3,000 to 4,000 employees to the Project. The Project is ideally located for New England Telephone's purposes because of the proximity to its corporate headquarters at 185 Franklin Street, which houses approximately 3,000 employees and several hundred thousand square feet of switching equipment. New England Telephone, due to its ownership position and the economic contribution of the 400,000 square feet of speculative space in Phase I of the Project will be able to pay an affordable rent consistent with its goal of consolidation in downtown Boston. Due to expiring leases, it is imperative that Phase I be available for occupancy not later than January, 1991. The contact at New England Telephone is Robert L. Talbot, District Manager, Real Estate Operations, New England Telephone and Telegraph Company, 245 State Street, 11th Floor, Boston, MA 02109, telephone 617-574-1077.

Economic Impact

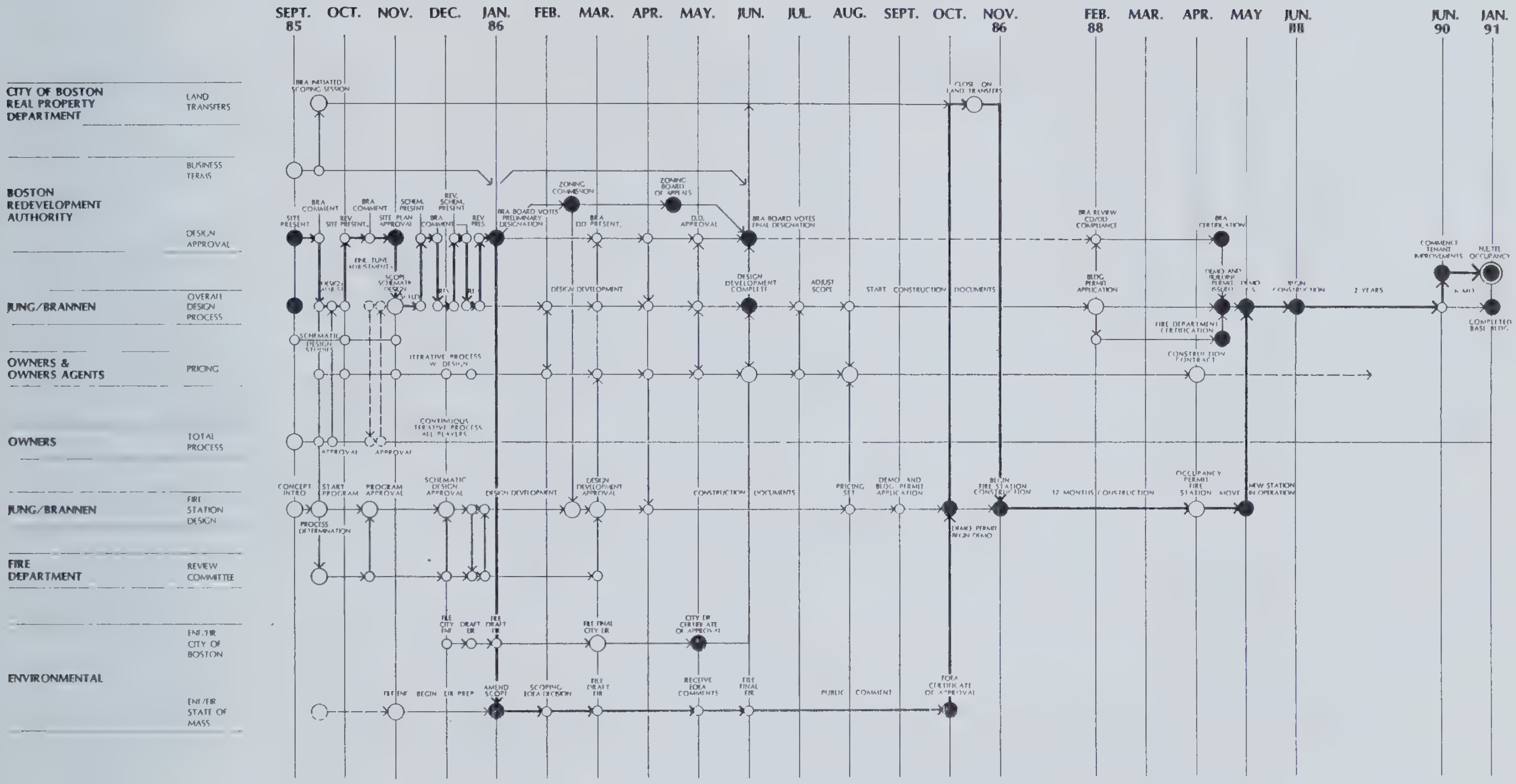
The Project will make a positive contribution to Boston's economic health through employment growth, taxes and linkage. In addition, because of New England Telephone's occupancy, the remaining speculative space will not have a significant destabilizing impact upon office vacancy rates.
It is expected that the Project will be producing approximately $6 million of net new real estate tax revenue annually and approximately $7.5 million of linkage payments for application to affordable housing. In addition, the Project will create 3,500 full-time year-long construction jobs and provide space for some 8,000 office and and retail employees.

Development Timetable

The attached flow chart indicates that New England Telephone requires occupancy beginning January, 1991. Working backward from that date shows a tight timetable, while it necessitates close cooperation among the various city and state agencies and departments. Of particular importance is an early resolution of the relocation of the fire station.

Development Timetable

Assumes fire station rebuilt on site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MAR.
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JUN. 88
JUN. 90
JAN. 91
CITY OF BOSTON REAL PROPERTY DEPARTMENT
LAND TRANSFERS
BUSINESS TERMS
BOSTON REDEVELOPMENT AUTHORITY
DESIGN APPROVAL
JUNG/BRANNEN
OVERALL DESIGN PROCESS
OWNERS & OWNERS AGENTS
PRICING
OWNERS
TOTAL PROCESS
JUNG/BRANNEN
FIRE STATION DESIGN
FIRE DEPARTMENT
REVIEW COMMITTEE
ENVIRONMENTAL
ENF/EIR CITY OF BOSTON
ENF/EIR STATE OF MASS
BRA INITIATED SCOPING SESSION
CLOSE ON LAND TRANSFERS
SITE PRESENT
BRA COMMENT
REV. SITE PRESENT.
BRA COMMENT
SITE PLAN APPROVAL
SCHEM. PRESENT
BRA COMMENT
REV. SCHEM. PRESENT
REV. PRES.
BRA BOARD VOTES PRELIMINARY DESIGNATION
ZONING COMMISSION
BRA DD PRESENT.
ZONING BOARD OF APPEALS
D.D. APPROVAL
BRA BOARD VOTES FINAL DESIGNATION
BRA REVIEW CD/DD COMPLIANCE
BRA CERTIFICATION
FINE TUNE ADJUSTMENTS
SCOPE SCHEMATIC DESIGN
SCHEMATIC DESIGN STUDIES
DESIGN DEVELOPMENT
DESIGN DEVELOPMENT COMPLETE
ADJUST SCOPE
START CONSTRUCTION DOCUMENTS
BLDG PERMIT APPLICATION
DEMO AND BUILDING PERMIT ISSUED
DEMO F.S.
BEGIN CONSTRUCTION
2 YEARS
COMMENCE TENANT IMPROVEMENTS
6 MO
N.E.TEL OCCUPANCY
COMPLETED BASE BLDG.
FIRE DEPARTMENT CERTIFICATION
ITERATIVE PROCESS W DESIGN
CONSTRUCTION CONTRACT
CONTINUOUS ITERATIVE PROCESS ALL PLAYERS
APPROVAL
APPROVAL
CONCEPT INTRO
START PROGRAM
PROGRAM APPROVAL
SCHEMATIC DESIGN APPROVAL
DESIGN DEVELOPMENT
DESIGN DEVELOPMENT APPROVAL
CONSTRUCTION DOCUMENTS
PRICING SET
DEMO AND BLDG. PERMIT APPLICATION
DEMO PERMIT BEGIN DEMO
BEGIN FIRE STATION CONSTRUCTION
12 MONTHS CONSTRUCTION
OCCUPANCY PERMIT FIRE STATION
MOVE
NEW STATION IN OPERATION
PROCESS DETERMINATION
FILE CITY ENF
DRAFT EIR
FILE DRAFT EIR
FILE FINAL CITY EIR
CITY EIR CERTIFICATE OF APPROVAL
FILE ENF
BEGIN EIR PREP
AMEND SCOPE
SCOPING EOEA DECISION
FILE DRAFT EIR
RECEIVE EOEA COMMENTS
FILE FINAL EIR
PUBLIC COMMENT
EOEA CERTIFICATE OF APPROVAL

The Travelers / New England Telephone Building

Developers
The Prospect Company and
Spaulding & Slye Company

Architects and Planners
Jung/Brannen Associates, Inc. 8 30 85

Section II
Site Analysis

Section II: Site Analysis

The Travelers site, encompassing the entire city block has been studied with regard to site characteristics which have potential impact upon a major development effort. The results of this undertaking are discussed in the body of this report. The high lights of the findings are summarized below.

Zoning

The site is located in a B-10 district and exceeds the PDA (Planned Development Area) threshold of one acre. A PDA will be sought.

City Development and Physical Context

A number of issues remain indeterminate at this time and will most likely remain so through the initial phases of the site planning.

The Fort Point Channel area remains a heavily planned but lightly developed area. It has tremendous future development capacity. The pier areas closest to downtown are currently used for commuter parking, which generates considerable pedestrian traffic across the footbridge ending on Purchase Street immediately adjacent to the site. The future intensity of footbridge traffic relates directly to future Fort Point Channel Developments.

There are two major existing structures on the site-the Travelers Building and the Fire Station. Their location severely restricts options for phasing and site maximization.

Traffic/Parking

The site is exceptionally located for easy vehicular access. A number of area intersections, however, are currently taxed to or near capacity at rush hour. The intersection at Purchase and Congress Streets is the most critical. The rush hour capacity of this area represents the controlling factor in projecting parking counts on site. This report recommends a parking capacity of 800 cars as a reasonable number based upon traffic analysis. Parking entry and egress are recommended on Oliver Street, based upon the street patterns and the potential reversing of the High Street traffic flow, and the fire station relocation.

Shadows

Two areas of shadow sensitivity have been identified within the immediate site area-the proposed Post Office Square Park and the Broad Street Historic District. New development should seek to minimize adverse impacts to these areas.

Wind

The International Place Environmental Impact Report indicates several areas where wind impacts approach critical levels in the immediate site area. To the degree possob;e, new development should seek to ameliorate at best, and at worst not exacerbate these conditions.

Geotechnical Conditions

The existing borings indicate excellent foundation support for high rise sturcutres, but extensive waterproofing requirements for additional trays below the first basement will be required.

Site History

Site History

When the Town of Boston was founded in 1630, Fort Hill was a central feature of its geography. The Hill, one of three great hills in the Town, dominated Boston's South End, and was used as fortification against invaders from the sea. Through most of the seventeenth and eighteenth centuries, it served as a pasture and common land. The fortification was strengthened at the time of the Revolutionary War.

In the early 1800's the area was occupied by residental structures and became known as one of Boston's finer neighborhoods adjacent to the colonial shoreline. Fashionable houses and two schools surrounded a park. During the 1840's, the area entered into a period of marked transition lasting about 25 years. The growth of Boston's commmerce pressed upon the neighborhood and it gave way to business uses. Landowners moved out, but held their properties for future sale. A good deal of the property was converted to rental and the general neighborhood character suffered. Health conditions became a problem and in 1866 the City began razing the houses and leveling Fort Hill to fill in the waterfront between wharves; thus Atlantic Avenue was created. By 1872 Fort Hill was leveled to near its present grade, and construction of office and other commercial properties to serve the retail and wholesale trades ensued. Very little of this historical character remains today. The Broad Street Historical District serves to preserve the highest quality buildings of the Fort Hill commercial history.

Changes in the construction of the Central Artery, the International Place Project, and the development of the Travelers site will once again alter the character of the historical area, bringing it to a higher and better use.

Planning and Zoning

Planning and Zoning

Planning

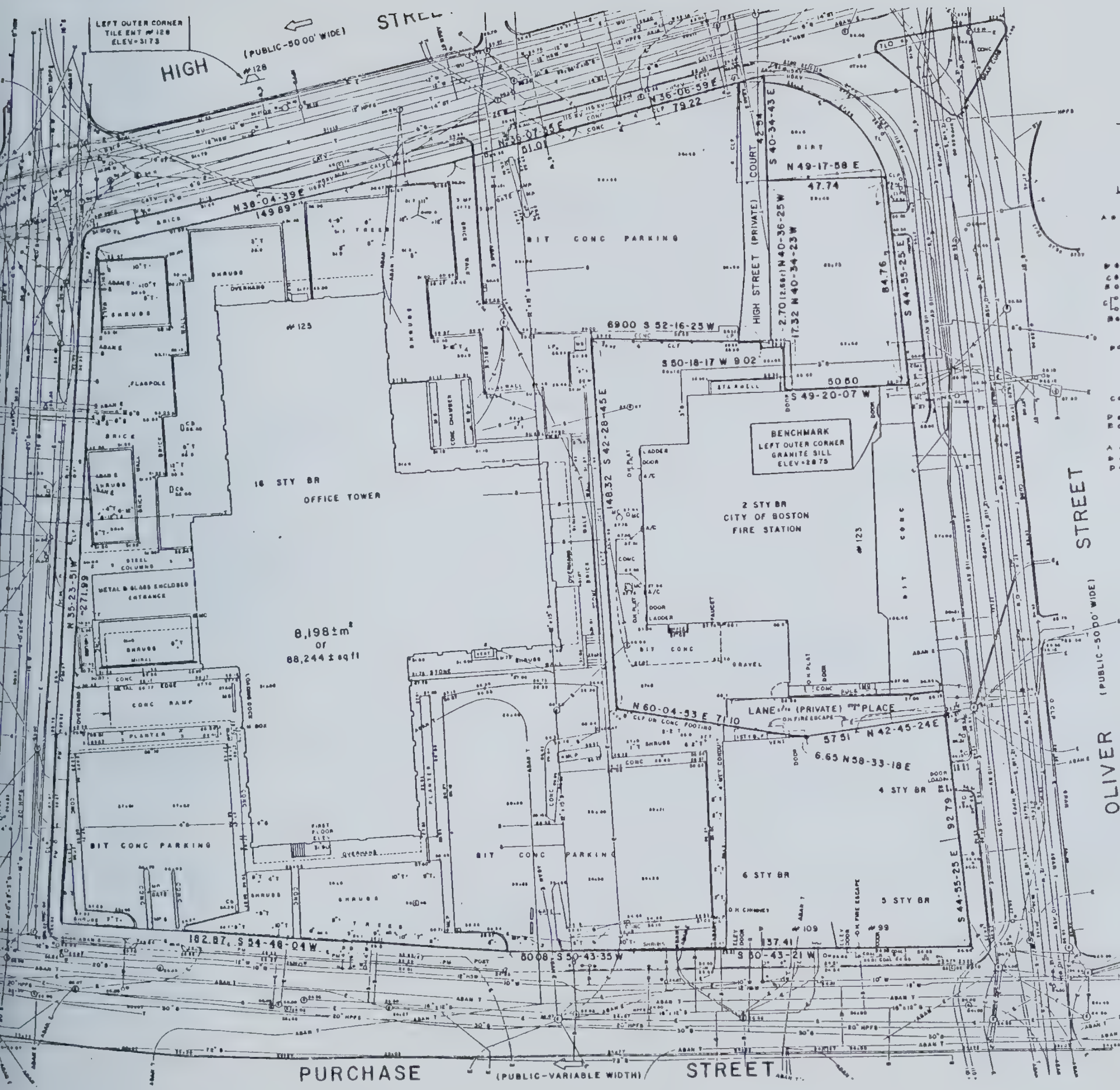
In order to obtain the necessary enabling for the programmed development within the required time frame a PDA will be sought.

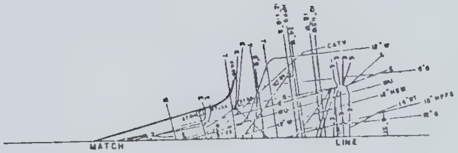
The Travelers site area of 88,245 square feet exceeds the one acre minimum required by the City Zoning Ordinance for a Planned Development Area.

Site Area Tabulation

Local/Property	Area in Square Feet
Travelers	88,254.00
Fire Station - City of Boston	19,069.27
Parking Lot - City of Boston	1,362.89
Total Available Project Area	108,677.00

Two pieces of property owned by the City are included in the development planning. The fire station is the largest, and a small pie-shaped parcel at the corner of Oliver and High Streets.


LEFT OUTER CORNER
TILE ENT #128
ELEV=31.73
HIGH STREET
(PUBLIC-50.00' WIDE)
#128
N 36-06-59 E 79.22
N 36-07-35 E 81.01
N 36-04-39 E 149.89
BIT CONC PARKING
COURT 42.54
S 40-34-43 E
DIRT
N 49-17-58 E 47.74
HIGH STREET (PRIVATE)
2.70 (2.66±) N 40-36-25 W
17.32 N 40-34-23 W
84.76
S 44-55-25 E
69.00 S 52-16-25 W
S 50-18-17 W 9.02
50.60
S 49-20-07 W
BENCHMARK
LEFT OUTER CORNER
GRANITE SILL
ELEV=28.75
#125
16 STY BR
OFFICE TOWER
2 STY BR
CITY OF BOSTON
FIRE STATION
#123
S 42-28-45 E
148.32
N 35-23-51 W
271.99
8,198±m²
or
88,244± sq ft
METAL & GLASS ENCLOSED ENTRANCE
CONC RAMP
PLANTER
BIT CONC PARKING
BIT CONC PARKING
LANE (PRIVATE) "T" PLACE
N 60-04-53 E 71.10
57.51 N 42-45-24 E
6.65 N 58-33-18 E
4 STY BR
92.79
6 STY BR
5 STY BR
S 44-55-25 E
#109
#99
182.87 S 54-48-04 W
80.08 S 50-43-35 W
37.41 S 50-43-21 W
PURCHASE STREET
(PUBLIC-VARIABLE WIDTH)
OLIVER STREET
(PUBLIC-50.00' WIDE)



LEGEND

A/C	AIR CONDITIONER
-CATV-	CABLE TELEVISION
C, CB	CATCH BASIN
CLF	CHAIN LINK FENCE
CLP	CONC LIGHT POLE
-D-	DRAIN
-E-	ELECTRIC
FB	FIRE ALARM BOX
-G-	GAS
-HPFS-	HIGH PRESSURE FIRE SYSTEM
⊙	HYDRANT
LP	LIGHT POLE
MC	METAL COVER
MG	METAL GRATE
MLP	METAL LIGHT POLE
MP	METAL POLE
OH	OVERHEAD
OHW	OVERHEAD WIRE
PM	PARKING METER
PB	PULLBOX
r	RECORD
-S-	SEWER
-ST-	STEAM
T	TREE
-T-	TELEPHONE
TL	TRAFFIC LIGHT
-W-, -HSW-	WATER, HIGH SERVICE WATER
-WU-	WESTERN UNION

REFERENCES

CITY OF BOSTON WATER & SEWER DEPT
- WATER PLATE CP-14
- SEWER & DRAIN PLATE CENTRAL-16
- HIGH PRESSURE FIRE SERVICE DIST PLAN

NEW ENGLAND TELEPHONE PLANS 225-1, 348, 349, 358, 359, 388, & 389.

BOSTON EDISON COMPANY PLANS T-1-C, T-72 T-73, T-153, S-4369 (SH 16-17), SR-21-5, SR-21-6 & SR-21-7

BOSTON GAS COMPANY PLANS 24, 25, 26, & 27.

WESTERN UNION

CABLEVISION/BOSTON PLANS 2549-1, 2549-

PLAN 4401M BY SURVEY ENGINEERS OF BOSTON.

NOTES:

SURVEY BY ZEISS ELTA 46R TOTAL STATION

UNDERGROUND UTILITIES WERE COMPILIED FROM AVAILABLE RECORD PLANS OF UTILITY COMPANIES AND PUBLIC AGENCIES AND ARE APPROXIMATE ONLY BEFORE DESIGN AND CONSTRUCTION CALL "DIG SAFE" 1-800-322-4844

ALL ELEVATIONS REFER TO BOSTON CITY BASE

I HEREBY CERTIFY THAT:

THIS SURVEY AND PLAN WERE PREPARED IN ACCORDANCE WITH THE PROCEDURAL AND TECHNICAL STANDARDS FOR THE PRACTICE OF LAND SURVEYING IN THE COMMONWEALTH OF MASSACHUSETTS OF JUNE 10, 1982.

DATE ________ GUNTHER GREULICH, RLS

RESEARCH:	C ROBER
FIELD:	C R
CALCULATION	R J BUCKLEY, RLS
DRAFTING:	E SCRIMA
CHECK	
PROJ MANAGER:	R J BUCKLEY, RLS
JOB NO	B-3088
DRAWING NO	44.03M

TOPOGRAPHIC AND UTILITY
PLAN OF LAND
BOSTON, MA
SUFFOLK COUNTY

SCALE: 1:240

0 10 METERS
0 20 40 FEET

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DATE AUG 3 [illegible]

SURVEY ENGINEERS OF BOSTON
A DIVISION OF GUNTHER ENGINEERING, INC
383 SUMMER STREET, BOSTON, MA

PREPARED FOR: TRAVELERS INSURANCE CO

SHEET 1

Zoning

There follows a profile of existing zoning regulations which are applicable to the site:

Zoning District	B-10
Minimum Lot Size:	None
Minimum Lot Width:	None
Maximum FAR:	10.0
Maximum Height of Building	None
Maximum Front Yard	None
Useable Required Open Space:	None
Minimum Side Yard:	None
Minimum Rear Yard:	Determined based upon the formula 10+L/20 where L is assumed to be the length of the building along the rear lot line.
Setback of Parapet (Distance from Lot Line):	Determined based upon the height and length of the building by the formula (H+L')/8 where H is equal to the building height minus the height of the first two floors or twenty-five feet, whichever is less, and L' is the length of the building parallel to the lot line above the height of the first two floors or twenty-five feet, whichever is less.
Off Street Loading	Four plus 1 for each additional 150,000s.f. over 300,000s.f.

All anticipated uses are allowable uses.

Planning and Zoning

Approvals*

The project requires approvals at the local, state, and possibly the federal level. Some of these reviews provide opportunities for written or spoken comments from the public before decisions are reached. The agencies involved and the approvals potentially needed by downtown projects are listed below. This list is not all inclusive, but is representative of the major agencies involved in the Boston development process.

Boston Redevelopment Authority (BRA)

Design Review

Planned Development Area

Development Impact Project Approval

Zoning Board of Appeal

Variances, Conditional Use Permits, and Exceptions

Zoning Commission

Zoning Amendments

Fire Station Relocation

Public Facilities Commission

Boston City Council

Property Disposition Votes

Boston Landmarks Commission

Boston Air Pollution Control Commission

Parking Freeze Permits

Boston Building Department

Building Permits

Massachusetts Environmental Protection Division

Environmental Impact Review

Massachusetts Division of Environmental Quality Engineering

Water Quality Certificate

It is imperative to the success of this development that all approvals be obtained in accordance with the enclosed Development Time Table.

---

*Source: "Downtown Projects, Opportunities for Boston" BRA October 30, 1984.

Physical Context

Physical Context

Boston has a rich urban fabric, the outgrowth of over 350 years of development from pasture and budding seaport to its present urban vitality. She is a prized jewel for those who enjoy a densely textured city life. It has been called the most European American city.

Downtown/Financial District

A great deal of Boston's charm and interest rests in her varied palette of building materials held together by a strong brick and granite thread that can be seen throughout the city. A second major and extremely important factor is the distinct lack of a comprehensible street grid in the City proper, particularly in the Financial District. Only the Back Bay has a strong orthagonal order. Downtown only becomes understandable by using buildings, public spaces, and materials as bench marks for a roadmap.

There is currently and has been traditionally a great deal of discussion about the particular requirements by public agencies for development proposals uniquely suitable to Boston - "Boston Buildings!" people say. The roots of such a design will certainly be grounded partially in a deep understanding of the City's physical context-its materials, massing, circulation, and mix of uses.

Immediate Site

The location of the Travelers building considerably restricts any development on the western half of the block during Phase I given the constraints of existing leases. The byproduct of this is that the location of the fire station on the eastern half of the site restricts the ability to place an efficient building on either of its abutting parcels to the north and south.

Although one of the structures fronting on Oliver Street (# 127) has been ranked as potentially landmarkable (#3), none of these buildings at the corner of Purchase and Oliver Streets presents significant qualities of sufficient character to warrant their retention as stand alone remnants of a now demolished old fabric.

Pedestrian Bridge

A pedestrian bridge spans the Central Artery immediately adjacent to the site on Purchase Street. This connector serves as a passage for pedestrians to to and from Atlantic Avenue and the Fort Point Channel District reached by crossing the Northern Avenue bridge.

Street Elevation
Views at Grade

The photographs portray the sidewalk views of the Travelers site and the opposing properties as they existed prior to the construction of International Place. Where the parking structure and old buildings once stood on the International Place site, new construction is underway. A main entry to the International Place tower will be directly across the street from the existing fire station.

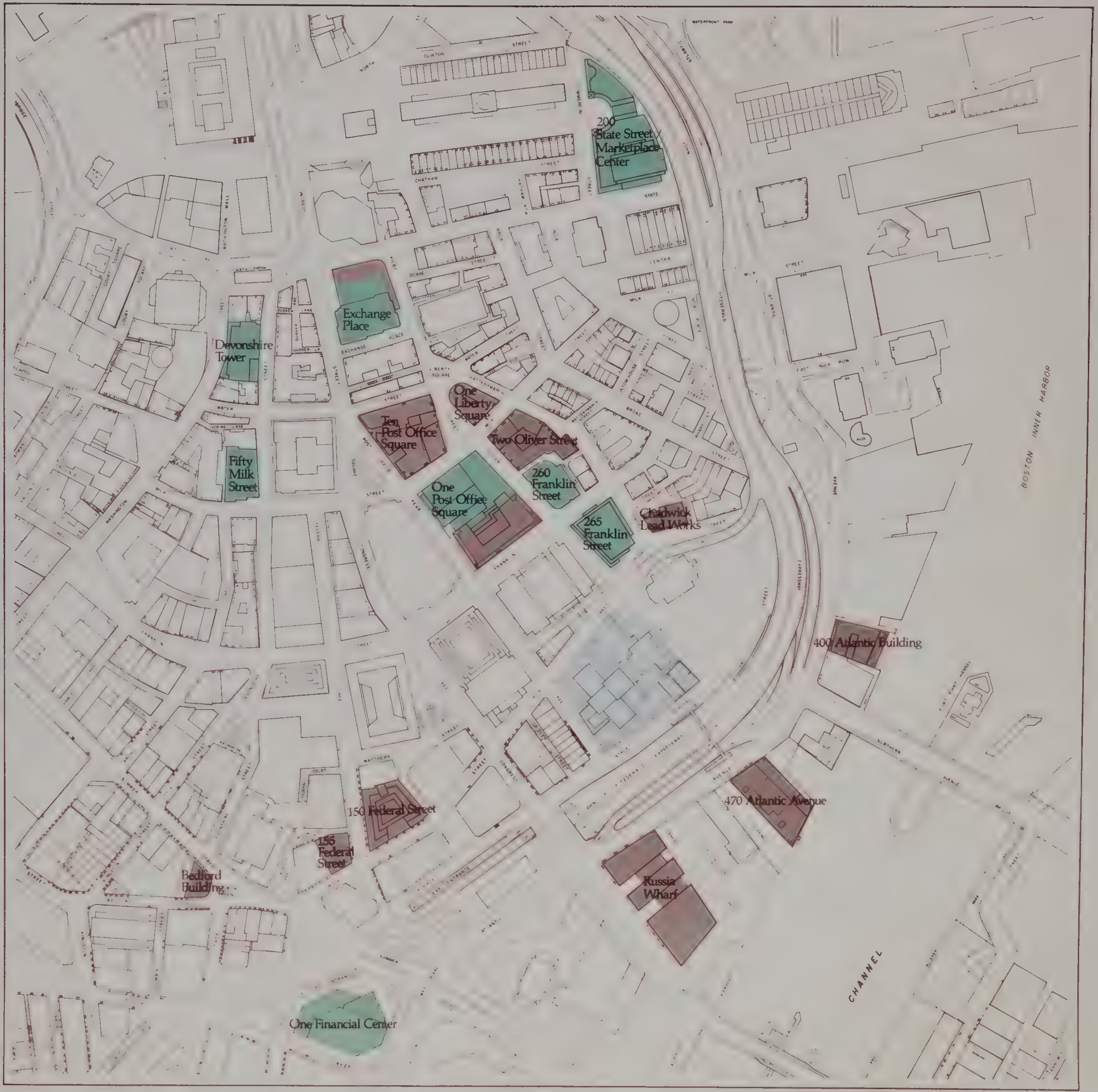
These photographs illustrate the diversified context of the site. The only currently active street for pedestrian interaction is along Pearl Street on the Richardson Block. A small amount of retail activity exists in the opposing High Street elevation.

Existing Conditions

🟥 Renovation

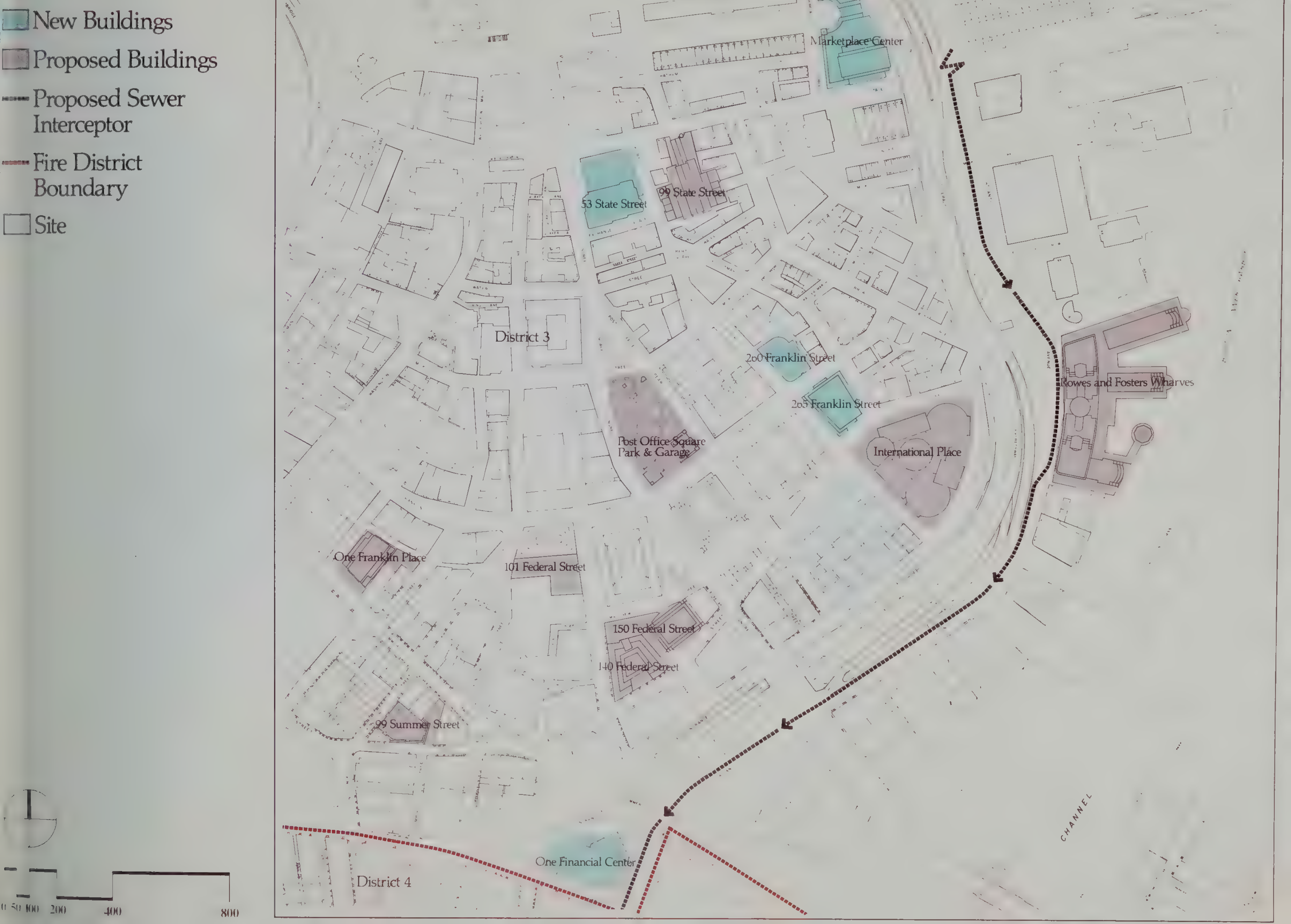
🟩 New Construction

☐ Site


200 State Street / Marketplace Center
Exchange Place
Devonshire Tower
One Liberty Square
Ten Post Office Square
Two Oliver Street
Fifty Milk Street
260 Franklin Street
One Post Office Square
265 Franklin Street
Chadwick Lead Works
400 Atlantic Building
470 Atlantic Avenue
150 Federal Street
155 Federal Street
Bedford Building
Russia Wharf
One Financial Center
BOSTON INNER HARBOR
CHANNEL

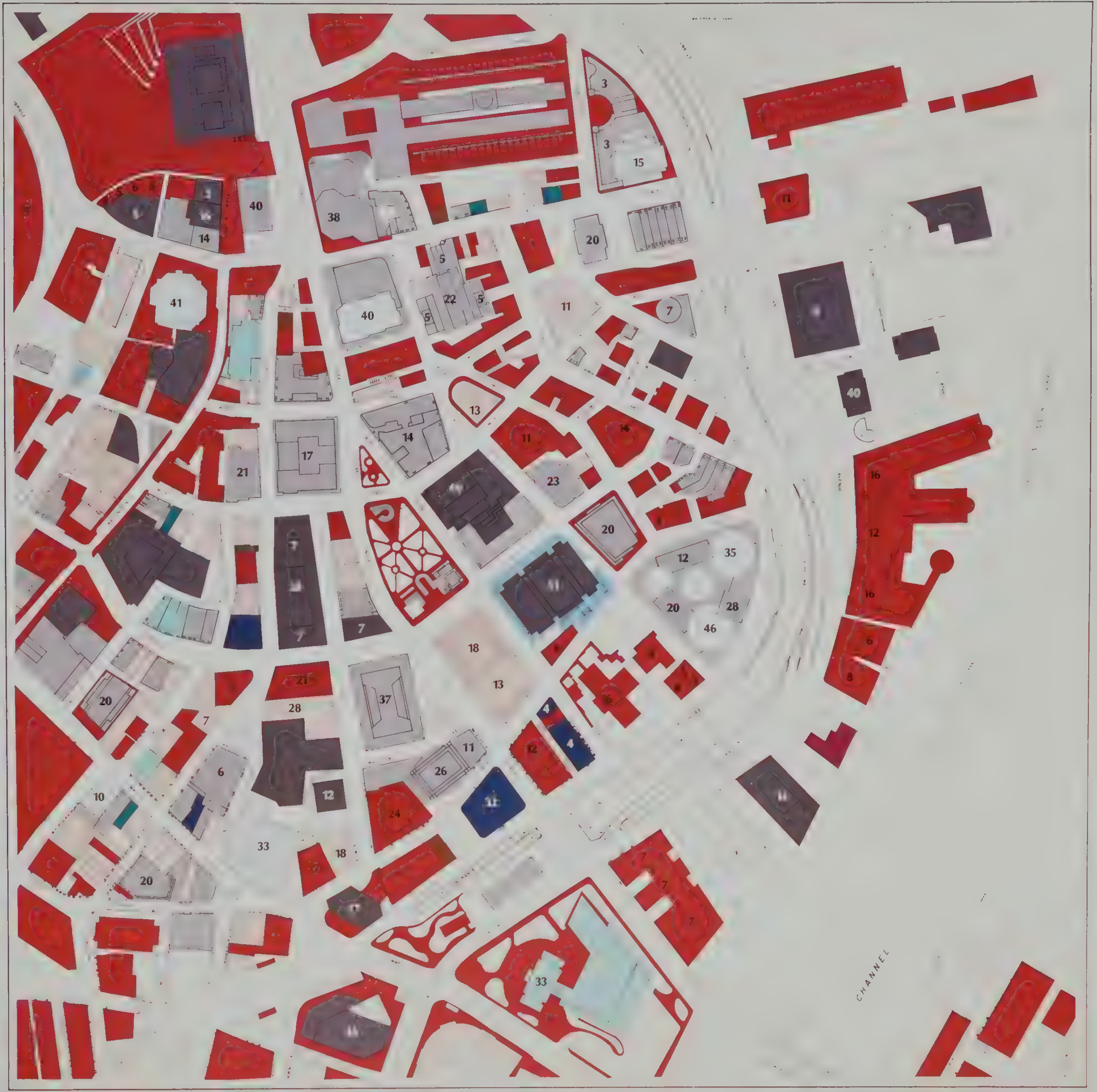
50 100 200
400
800

Proposed Conditions


New Buildings
Proposed Buildings
Proposed Sewer Interceptor
Fire District Boundary
Site
0 50 100 200 400 800
Marketplace Center
53 State Street
99 State Street
District 3
200 Franklin Street
205 Franklin Street
Rowes and Fosters Wharves
Post Office Square Park & Garage
International Place
One Franklin Place
101 Federal Street
150 Federal Street
140 Federal Street
99 Summer Street
One Financial Center
District 4
CHANNEL

Physical Context

▨ Granite
▨ Precast Concrete
▨ Limestone
▨ Brownstone
▨ Brick
▨ Marble
▨ Slate
☐ Glass
▨ Cast Iron
▨ Metal Panels
▨ Wood
▨ Stucco
25 Building Height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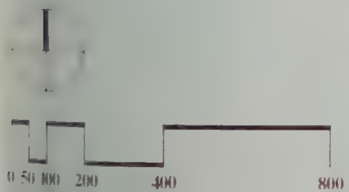
CHANNEL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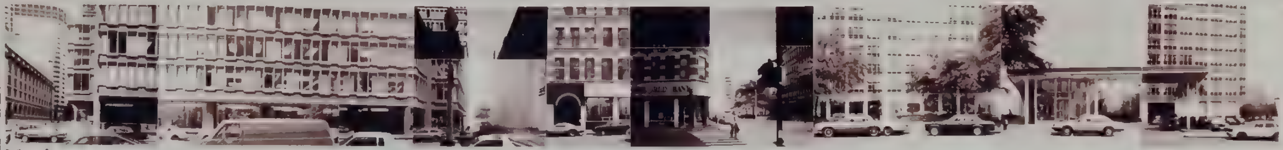
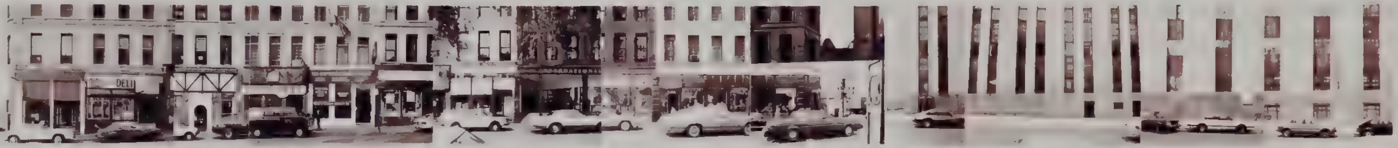
Street Elevations

Pearl Street

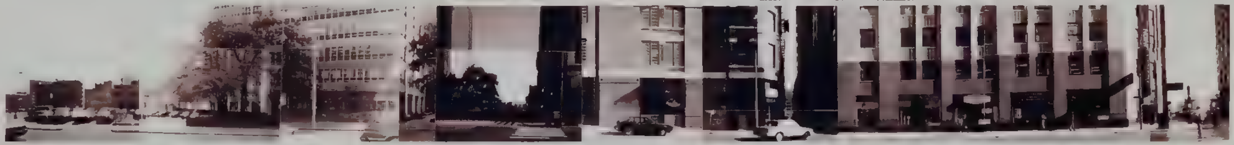


Northeast

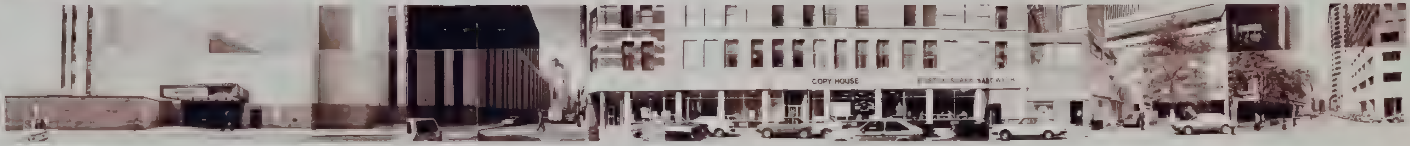


Southwest

High Street

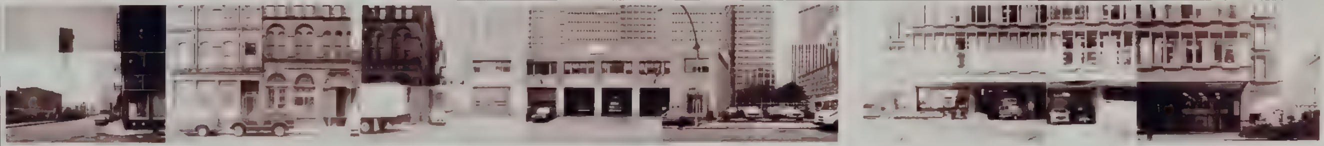


Southeast

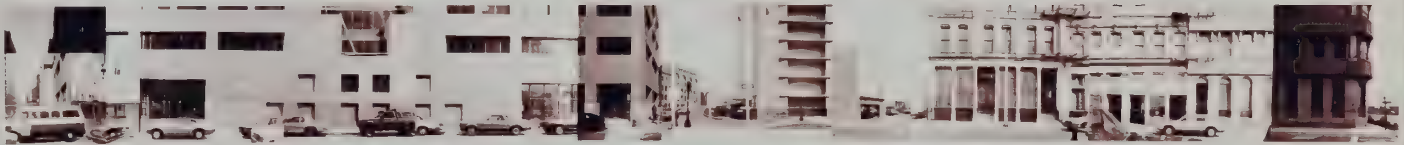


Northwest

Oliver Street

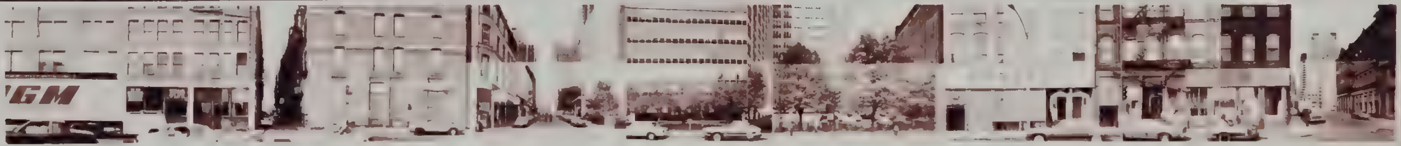


Southwest

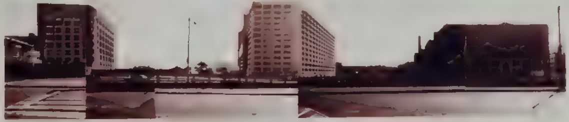


Northeast

Purchase Street



Northwest



Southeast

Street Dynamics

Street Dynamics

Good Dynamics-
The Variables

Successful cities, that is successful from a user-based viewpoint, are extremely complex phenomena. Boston is certainly one such city, but its success is not uniformly distributed geographically, nor in fact is any city's.

The degree and character of public amenity improvements required for a development will vary given the project's location and its priority in the City's overall plan.

Boston's street dynamics and potential for enrichment at the pedestrian level are best understood by looking at the following variables:

Abutting Uses-Retail, Office, Public, Semi-public, etc.
Public Amenities-Parks, Open Space, Sidewalk Landscaping and Furniture, etc.
Pedestrian Flow-Patterns of movement over time by user type.
Vehicular Flows-Street flow patterns and loads over time.
Public Transportation-Routes and stops by type.

Major Pedestrian Pathways

Boston has an unique pedestrian topography linking the Back Bay with the Boston Harbor Park. The major retail nodes are connected by carefully planned pedestrian corridors and spaces. Copley Place and the Prudential Center lead to the Boylston/Newbury Street retail district, which in turn is connected to Downtown Crossing via the Boston Garden and Common. Moving down Washington Street's retail corridor takes one to Government Center and State Street, which open into the Faneuil Hall Markets, the future Market Place Center and its pedestrian walkway to Waterfront Park. This network represents the result of major planning studies and a great deal of investment by the City and the private sector. Its development and refinement are an ongoing process. It is the primary pedestrian/retail network in the City.

Other major pedestrian corridors are along the waterfront, represented by the newly released Harbor Park Plan; the Broad Street corridor leading to the Rowes Wharf Project; the Devonshire, Congress and Federal Street Corridor to South Station; and the High Street corridor from South Station to Rowes Wharf. All of these are secondary pedestrian pathways that depend to a great deal on the circulation of both tourists and office workers.

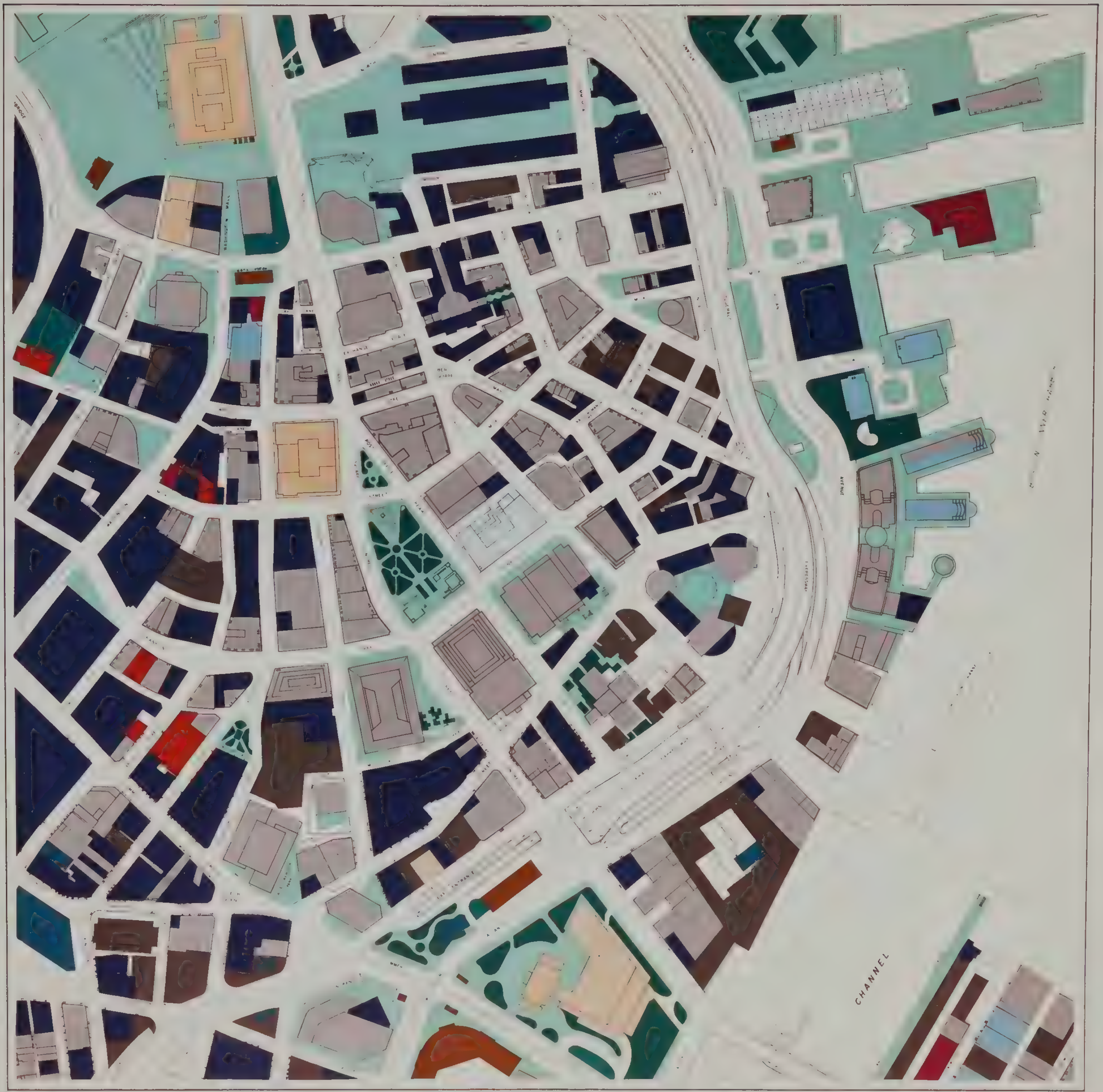
The Travelers site relates to several of the secondary circulation paths-the Broad Street corridor is close by and High Street Corridor abuts. The "Street Dynamics" illustration shows the location of retail uses on grade for the overall downtown. The lack of high density in the immediate area further reinforces the secondary nature of the site's location regarding retail uses. The development of the site, its sidewalks, open spaces, and retail uses will primarily serve the work force in the immediate area.

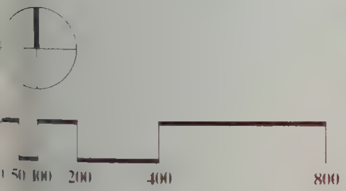
Pedestrian Circulation/
Site Access

Major commuter and pedestrian circulation to the site will be from the transportation centers-Rowes Wharf, South Station, and Washington Street Station. Other pedestrian routes will be from parking facilities in the area like Post Office Square, the Bedford Garage and the Fort Point Channel Area. The pedestrian component of the work force occupying future development will approach the site from all directions.

treet Dynamics

Office
Parking
Government Offices
Retail
Residential
Hotel
Plaza
Planted Public Space
Museum
Church
Transportation Center
Mechanical Building




50 100 200 400 800

Utilities

Utilities

Service

All major utility lines are located adjacent to the site in the streets, and a number of utilities have easements through the site in the vacated Harvard Street right of way, which formally ran through the site from High to Purchase Streets.

Proposed Interceptor and Connections

The proposed East Side Interceptor and the new storm sewer connected to International Place will have impacts upon the Travelers site development. It is most likely that the site will be required to direct all storm drainage to the storm system in Oliver Street, even if this requires additional lengths of sewer line to be constructed by the proponents. Sanitary waste will likely be required to enter the Oliver, Pearl Street or Purchase Street systems at points that lead southeast directly to the Interceptor. Connections will probably not be allowed in a manner that would increase flow toward Milk Street.

Sewer

Permits

The project will require the following approvals for discharge of sanitary sewage to the sewer system:

Boston Water and Sewer Commission Permit for Sewer Connection

Massachusetts Division of Water Pollution Control Permit for Sewer Connection

Massachusetts Water Resources Authority User Permit

For the first two approvals, one permit application is required with the BWSC signing-off first, followed by the Massachusetts DWPC.

Sewage Retention Tank

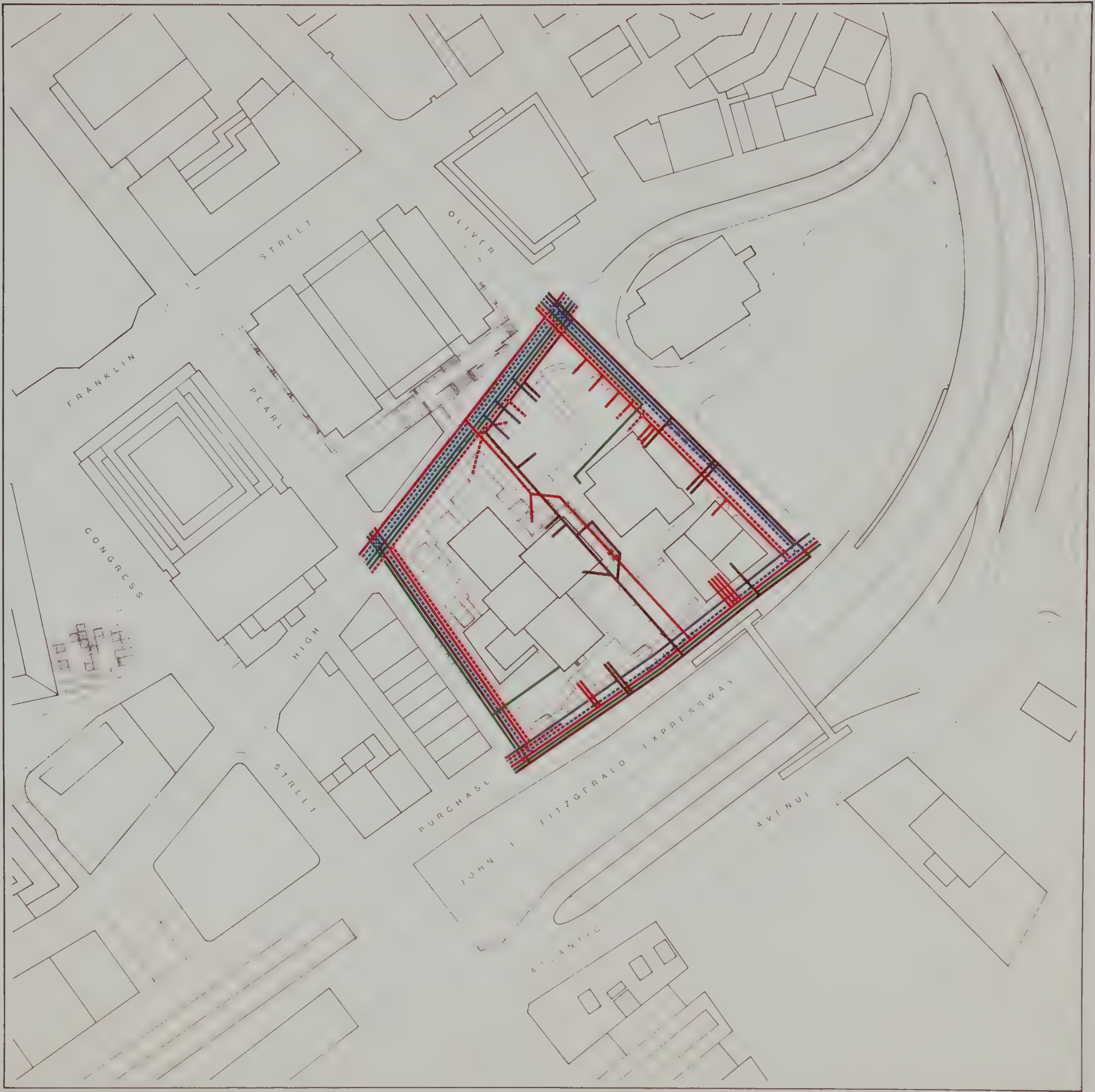
The BWSC currently has a policy which requires sewage retention tanks for any new sanitary connection exceeding 10,000 gallons per day tributary to the old sections of the East Side Interceptor. This main sewer line serves the financial and downtown areas and is currently overtaxed due to a number of problems. The sewage holding tank must be designed to hold an entire day's generation of sanitary sewage for the development. Discharges can only be made during periods of low tide when the load on the Interceptor is lowest. This generally requires use of a tide clock/pumping arrangement The BWSC intends to use this policy until the East Side Interceptor replacement project is complete.

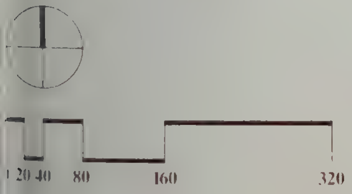
Separate Connections

The BWSC also requires the use of separate connections to the street sewer for sanitary sewage and storm water drains. This is required so that separation of these two different types of waste can be accomplished.

Utilities

— Electric
— Telephone
— Gas
┄ Steam
— Water
— High Pressure Fire System
— Sewer


STREET
OLIVER
FRANKLIN
PEARL
CONGRESS
HIGH
STREET
PURCHASE
JOHN F. FITZGERALD EXPRESSWAY
AVENUE
ATLANTIC


1 20 40
80
160
320

Geotechnical Review

Geotechnical Review

Introduction

Purpose and Scope

The purpose of this report is to provide preliminary evaluation of geotechnical aspects of construction feasibility for the development. The comments are based on readily available site subsurface data and building foundation information collected to date. The study site is located in Boston's Fort Hill Square area bounded by Purchase, Oliver, High and Pearl Streets.

The report describes anticipated subsurface conditions, existing and historical site conditions and provides comments on foundation alternatives and below-grade construction considerations for future site development.

Site Conditions

Topography

Topographically the site slopes downward slightly from west to east with grades ranging from about El. 33 near the intersection of Pearl and High Streets to El. 24 near the intersection of Purchase and Oliver Streets.

Elevation Datum

Elevations referred to in this report are based on the Boston City Base Datum (BCB), wherein El. 0.0 BCB equals El. 5.65 of the National Geodetic Datum (NGVD-formerly the U.S. Coast and Geodetic Survey Mean Sea Level Datum of 1929).

Subsurface Conditions

Previous Subsurface Explorations

Readily available data on subsurface soil and rock conditions and groundwater levels at and near the site have been assembled. Records of 48 test borings, 9 groundwater observation wells and 4 groundwater piezometers were gathered from Haley & Aldrich files on projects on and around the study site. In addition, test boring information from the 1961 and 1969 editions of "Boring Data from Greater Boston," published by the Boston Society of Civil Engineers, was studied.

Approximate locations of test borings from Haley & Aldrich records are shown on the attached Test Boring Location Plan, Figure 1. Elevations listed on the plan are those of ground surface at test boring locations at the time of drilling and may not represent existing ground surface elevations.

Soil and Rock Conditions

The subsurface exploration data indicate the following probable soil and rock sequence of the site from ground surface downward:

Miscellaneous Fill
Glacial Deposits
Bedrock

The fill thickness on the site varied from 0 ft. up to about 15 ft. and was generally medium-compact to compact in density. Glacial deposits below the fill were as thick as 125 ft. and generally described as very dense. These soils are either called glacial till or glaciomarine soils depending on the apparent mode and environment of deposition. The glacial deposits directly overlie the Cambridge Argillite bedrock in the site area. Based on available information, the bedrock is between 100 and 150 ft. below ground surface. A subsurface profile through the study site is shown on Figure 2.
The location of the original shoreline during colonial

times was investigated and is sketched on Figure 1. The subsurface data in the site vicinity appear to correlate with the colonial shoreline location. It appears that the project site is located inside the colonial shoreline.

Groundwater Levels

There is evidence of two groundwater levels in the site vicinity. Typcially, groundwater levels measured in piezometers and observation wells near the site have varied between El. 3 and 9 or from 15 to 30 ft. below site ground surface elevations. These levels are within the range of Boston Harbor tidal fluctuations, between about El. 1 and 10.5, but do not appear to vary with the tide. Water levels between El. 14 and 23 (between about 1 and 19 ft. below site ground surface elevations) have been measured in several nearby shallow observation wells. These levels indicate the possibility of a perched groundwater level of El. 23 should be assumed for planning considerations.

Preliminary Foundation Considerations

Existing Foundation Conditions

Information gathered for this report indicates that the Travelers Building was constructed in the late 1950's. Foundation plans indicate that the building has one basement level at El. 18 and is founded on large spread footings bearing on natural soil between El. 1.4 and 13.3. The City Fire Station has one basement level under at least the northwest side of the building and is likely founded on footing foundations bearing on natural soil. The remaining buildings on the site have one basement level each and are also likely supported by shallow foundations.

From available information, the structures around the study site from the expressway ramp north and west, including the ramp, are founded on shallow footings or mat foundations bearing in natural glacial till below the fill. There are no indications at present that any buildings near the site have permanent underdrain systems or have wood piles as part of their foundation systems. The nearest wood piles appear to be those that support several older waterfront structures along Fort Point Channel and Boston Harbor to the south and east, across the expressway from the site.

Foundation Alternatives

The existing miscellaneous fills are not suitable to support buildings foundations. Proposed buildings should be founded in the glacial deposits. Foundations that are considered technically and economically feasible for building support are footings or mats. Footings are generally most economical for lighter loads. When column loads become large enough that the combined areas of footings become greater than about 50 or 60 percent of the building area, then typically mat foundations become more economical.

Development Planning Considerations

Soil and groundwater conditions should be considered in development planning. Fortunately, subsurface conditions at the study site are among the best in the Boston area, relative to construction.

Based on evaluation of available data, the glacial soils at the study site are considered capable of supporting structures up to 50 stories in height on shallow footings or mat foundations. Structure settlements will result primarily from elastic deformations of the foundation/soil system and would be expected to occur mostly during construction as loads are applied. No significant post-construction settlement would be expected, and differential settlements would be small.

As suggested in above, a design groundwater level of El. 23 should be assumed for planning purposes. In order to provide uplift resistance to hydrostatic pressure, a building must have sufficient weight (height) for various excavation depths. For example, a building with lowest floor slab bearing 60 ft. below ground surface at the study site should be at least 30 stories tall above grade to have sufficient weight to resist hydrostatic pressures. Otherwise a permanent underdrain system may be used below the lowest floor slab. However, such an underdrain system must be so designed that the groundwater levels are not lowered in the surrounding areas.

Geotechnical Review

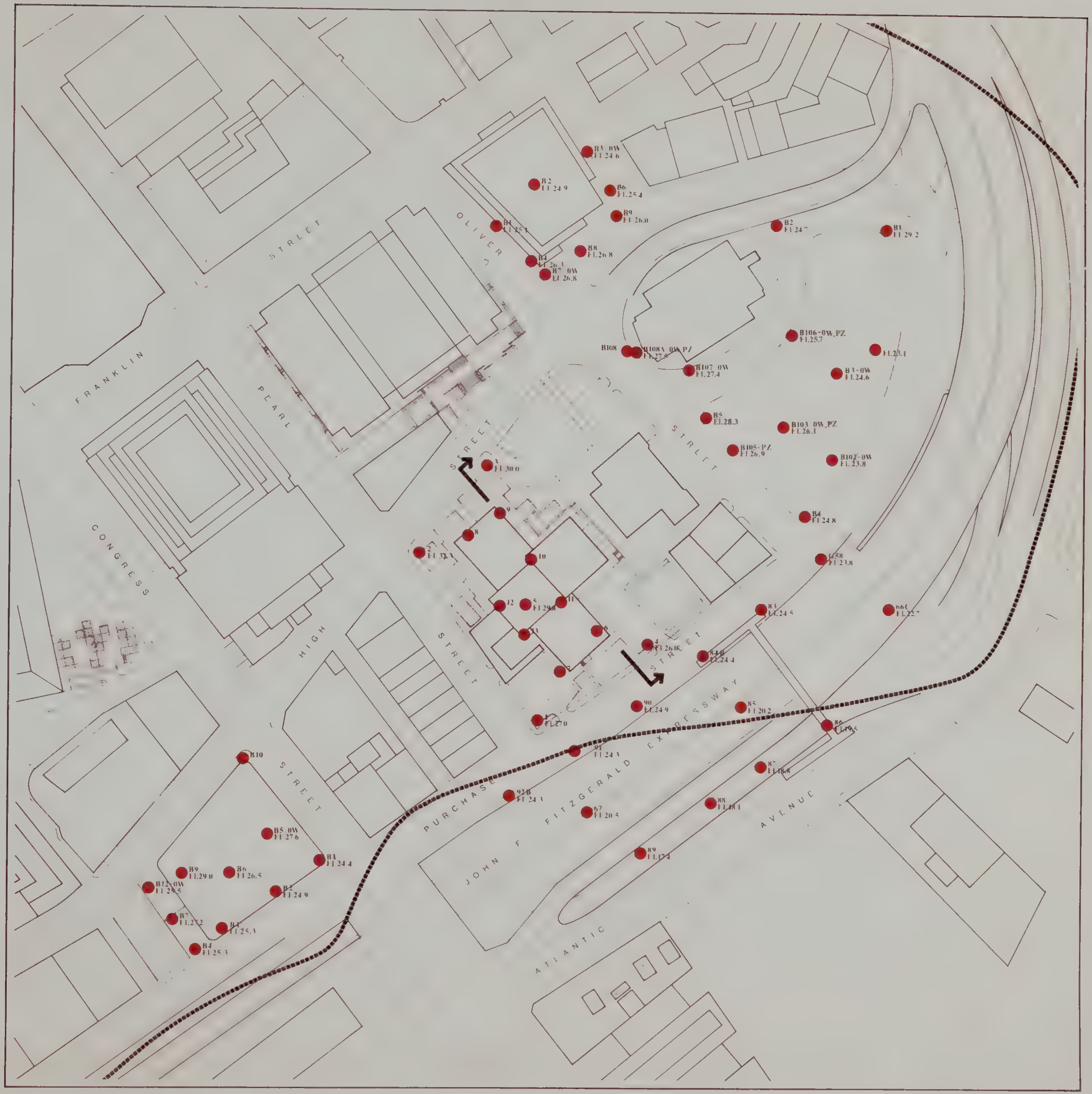
Based on expected soil and groundwater conditions, deep excavations (60 ft. or more) at the study site can be considered. Lateral earth support would likely be best accomplished by a system of steel soldier piles and wood laggings with external bracing consisting of tiebacks drilled and grouted into the glacial till. Installation of steel sheet piling would be nearly impossible through the glacial soils.

A soldier pile and lagging system will allow seepage into the excavation during construction. In addition, seepage will occur upward through the excavation bottom. Glacial soils are generally not very pervious, so the volume of water seeping into the excavation should be small enough for removal by open pumping. However, significant pervious zones may be encountered during excavation in the glacial till. Such zones may require dewatering or grouting before the excavation can proceed deeper.

In summary, geotechnical aspects of construction on the study site appear to be favorable, so that a wide range of site development needs can be accommodated, including varying building heights, multiple basement levels and incorporating existing buildings into the development plan.

Test Boring Locations

- ● Boring location
  OW—Groundwater observation well
  PZ—Groundwater piezometer
- ▪▪▪▪ Outline of estimated Colonial Boston Shoreline
- ↰ Location and orientation of subsurface profile, Figure 2


FRANKLIN
STREET
OLIVER
PEARL
STREET
CONGRESS
HIGH
STREET
STREET
STREET
STREET
PURCHASE
JOHN F FITZGERALD EXPRESSWAY
ATLANTIC AVENUE
B3 OW
El 24.6
B2
El 24.9
B6
El 25.4
B9
El 26.0
B8
El 26.8
B4
El 26.3
B7 OW
El 26.8
B2
El 24.7
B1
El 29.2
B106-OW,PZ
El.25.7
B108
B108A OW,PZ
El.27.5
B107 OW
El.27.4
El.23.1
B3-OW
El.24.6
B5
El.28.3
B103 OW,PZ
El.26.1
B105-PZ
El 26.9
B102-OW
El.23.8
B4
El 24.8
3
El 30.0
9
8
2
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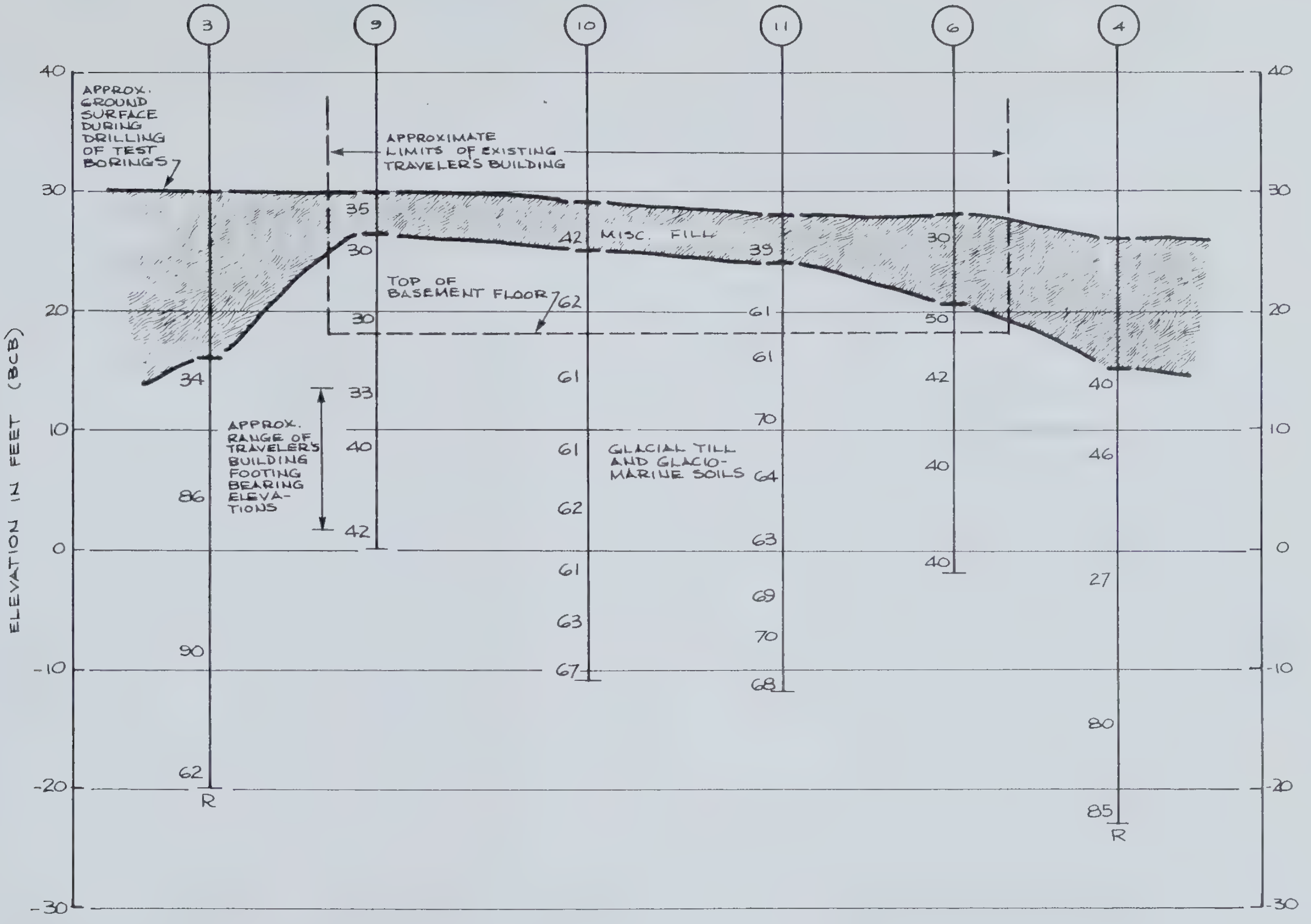
12
11
6
84B
El.24.4
83
El.24.5
85
El 20.2
86
90
El.24.9
91
El 24.3
92B
El 24.3
87
88
89
B10
B5 OW
B9
B6
B1
B12 OW
B2
B7
B3
B4
20 40 80 160 320


3
9
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4
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0
-10
-20
-30
ELEVATION IN FEET (BCB)
APPROX. GROUND SURFACE DURING DRILLING OF TEST BORINGS
APPROXIMATE LIMITS OF EXISTING TRAVELER'S BUILDING
MISC. FILL
TOP OF BASEMENT FLOOR
APPROX. RANGE OF TRAVELER'S BUILDING FOOTING BEARING ELEVATIONS
GLACIAL TILL AND GLACIO-MARINE SOILS
34
86
90
62
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35
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33
40
42
42
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42
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40
46
27
80
85
R

LEGEND:

③	TEST BORING DESIGNATION AND LOCATION
	APPROXIMATE GROUND SURFACE ELEVATION DURING DRILLING OF TEST BORING
▨	APPROXIMATE TOP OF NATURAL INORGANIC GLACIAL SOIL DEPOSITS
34	NUMBER OF BLOWS WITH A 140 LB. HAMMER FALLING 30-IN. TO ADVANCE THE 2 IN. DIA. SAMPLING PIPE ONE FOOT.
	BOTTOM OF TEST BORING
R	INDICATES "REFUSAL". TEST BORING COULD NOT BE ADVANCED FURTHER WITH AVAILABLE EQUIPMENT.

NOTES:

1. TEST BORING CONDUCTED DURING 1955 AND 1957 BY RAYMOND CONCRETE PILE CO.
2. PROFILE IS FOR ILLUSTRATIVE PURPOSES ONLY. ACTUAL SUBSURFACE CONDITIONS AND EXISTING GROUND SURFACE MAY VARY FROM THOSE SHOWN.
3. REFER TO REPORT TEXT FOR DISCUSSION OF SUBSURFACE SOIL AND GROUNDWATER CONDITIONS.
4. REFER TO FIGURE 1 FOR LOCATION AND ORIENTATION OF SUBSURFACE PROFILE A-A IN PLAN.

Transportation Assessment

Transportation Assessment

Existing Transportation System

The existing transportation system serving the site is well developed, consisting of regional highways, an arterial street system, parking facilities and public transportation lines, including bus, rail and commuter boat services. The facilities are described in the following paragraphs and highlighted on the figure entitled "Transportation Network".

Streets and Highways

The primary regional highway serving the site is the Central Artery, which passes through the downtown core and links the Southeast Expressway and Mass Turnpike (I-90) on the south with I-93/I-95 and the cross-harbor tunnels to the north. Off-ramps serving the site are provided to High Street for both northbound and southbound traffic, while on-ramps are provided from Congress Street.

The local street system serving the site forms a one-way grid with Purchase Street and High Street both one-way westbound, Pearl Street one-way northbound, and Oliver Street one-way southbound. The lack of an eastbound roadway on the site perimeter restricts site curculation but does not hinder site accessibility from the regional highway network.

Peak traffic flows on the streets surrounding the site are presented below.

As noted in Table 1, High Street and Purchase Street carry comparable volumes during the morning commuter peak period. During the afternoon peak period however, Purchase Street, which functions as a frontage road to the Central Artery, carries substantially heavier volumes than High Street. Pearl and Oliver Streets are much less intensely used. Congress Street, one block west of the site, is a major egress corridor from the Financial District, carrying heavy evening peak flows.

Table 1
Area Traffic Volumes

Location	AM Peak Hour	PM Peak Hour
High Street	1,000	500
Purchase Street	1,100	1,300
Pearl Street	50	30
Oliver Street	500	150
Congress Street	800	1,250

Throughout the downtown, traffic flow during the peak commuter periods, particularly the evening peak, is congested. The source of this congestion on the local street system can usually be traced to key intersections. Locations such as Dewey Square and Dock Square are well-known congestion bottlenecks. In the vicinity of the proposed site, there are also some critical intersections. During the morning peak hour, the intersection of Surface Artery/High Street/Purchase Street operates near capacity and is considered a congested intersection. Traffic destined for the project site from the south and west would pass through this location during the morning peak hour.
Similarly, the intersection of Congress Street/Purchase Street west of the site is an evening peak hour problem location. This intersection currently operates at capacity and is expected to carry volumes in excess of capacity as area development continues. All traffic exiting the site during the evening peak hour and destined for the Central Artery either northbound or southbound will pass through this intersection.

Parking Facilities

The parking system in downtown Boston is beginning to feel the strain resulting from increased demand from new development with little or no expansion in the public parking supply. Of the nearly 7,500 public parking spaces within 1,500 feet of the site, 90 percent are occupied by noontime on a typical day, according to a recent city study.

Transportation Assessment

Public Transportation

The proposed site is well served by public transportation. Three of the four MBTA subway lines (Orange, Red and Blue) have stations within 1,500 feet of the site. The fourth line (Green) is approximately a 2,000-foot walk.

In addition to the subway lines, the terminals of the commuter rail lines serving the southern and western suburbs are located at South Station, which is less than 1,500 feet from the site, and the terminus of the MBTA's express bus service to the western suburbs is located only two blocks west of the site. Finally, a new commuter boat docking facility serving South Shore communities and Logan Airport is under construction located at Rowes Wharf approximately 1,000 feet east of the site.

Over the next five years, substantial improvements are programmed for the subway and commuter rail lines serving downtown. These improvements, which include track and signal system upgrading, station modernization and new rolling stock, will insure that adequate system capacity exists to accommodate expected new demand from increased development and changes in commuting patterns.

Pedestrian Pathways

The pedestrian pathways which will be used by the project population are a function of downtown activity centers, parking facilities and transit stations. There are five major centroids which will generate or attract significant pedestrian activity to or from the site. These include:

Government Center/Faneuil Hall
Market area
Downtown Crossing
South Station
Northern Avenue/Fort Point Channel
Rowes Wharf/Waterfront area.

The heaviest activity during the commuting hours will be noticed on pathways between the site and the South Station and Northern Avenue/Rowes Wharf areas by nature of their use as major transportation terminals/parking facilities. Streets most likely to be used by pedestrians will include:

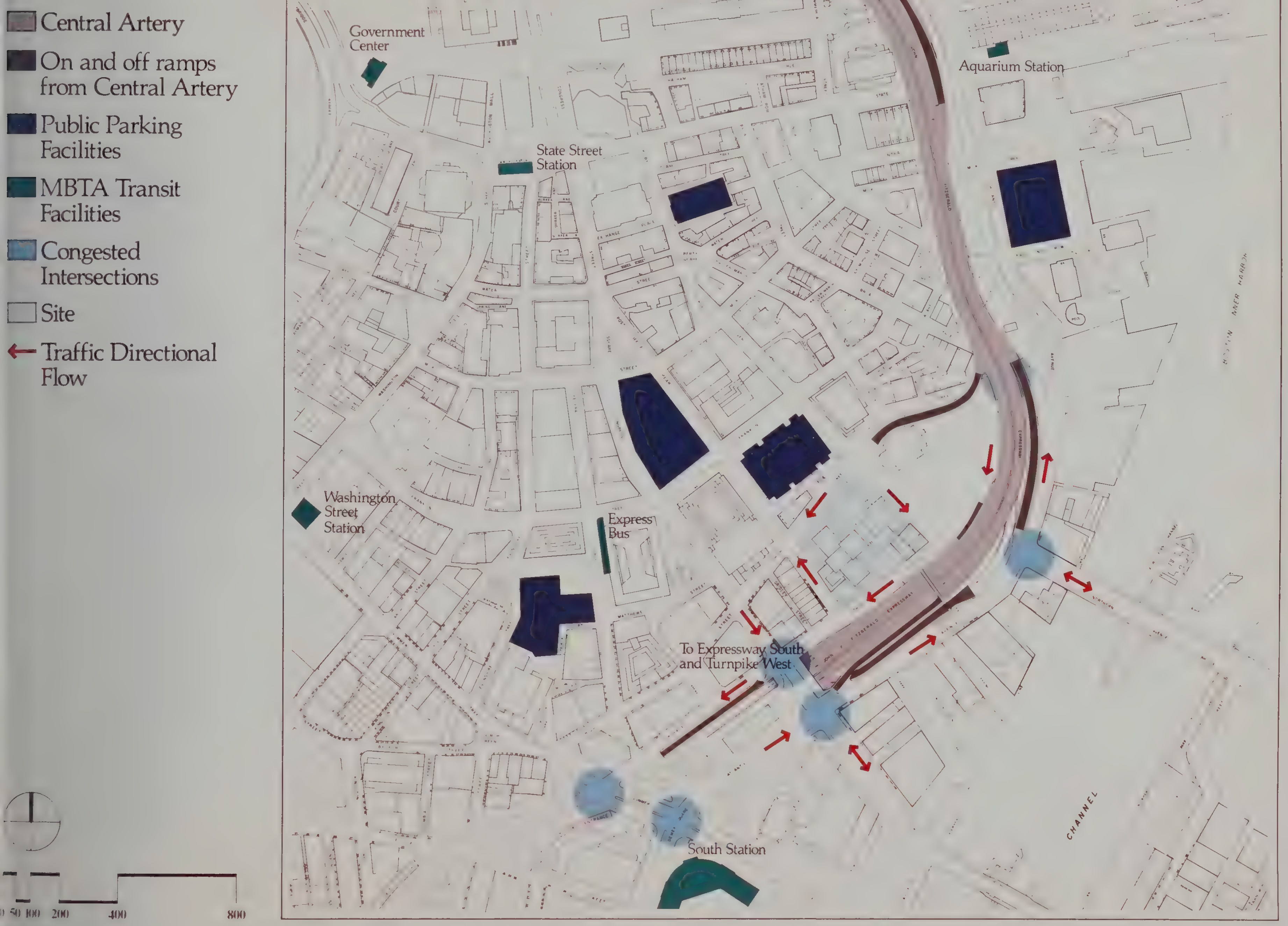
Atlantic Avenue adjacent to the Federal Reserve Building
Congress Street south of the project
Purchase Street
High Street east of the project, and
The pedestrian bridge over the Central Artery.

During the non-commuter periods, particularly noontime, the orientation of pedestrian activity will likely shift toward the Downtown Crossing and Faneuil Hall Market Place centroids as project tenants conduct their personal business. The most heavily used streets for this purpose will likely be High Street and Franklin Street, west of the site, and Pearl/Congress Streets, north of the site.

Through-project pedestrian traffic potential is limited. Pedestrian traffic between transportation terminals and final destination offers the most likely source of through-pedestrian activity. These linkages include the pathways between Northern Avenue/Fort Point Channel and the Financial District, and South Station and the Broad Street Redevelopment area.

The physical condition of most of the pedestrian pathways in downtown is good, with adequate sidewalk width and crossing controls.

Transportation Network



▨ Central Artery

■ On and off ramps from Central Artery

■ Public Parking Facilities

■ MBTA Transit Facilities

● Congested Intersections

☐ Site

← Traffic Directional Flow

Cross Harbor Tunnel
Airport
To I-95/93 North
Government Center
Aquarium Station
State Street Station
Washington Street Station
Express Bus
To Expressway South and Turnpike West
South Station
Channel
0 50 100 200 400 800

Future Transportation And Parking Improvements

A number of changes are expected to occur in the transportation network over the next decade. These range from minor circulation changes and roadway improvements which will likely occur in the short-term to major reconstruction of the Central Artery, which will not be completed for at least 15 years. The figure entitled "Planned Transportation Improvements" highlights the more imminent short-term changes in the transportation system.

Short-Term Roadway Changes (5-10 years)

In the short-term, three roadway changes will likely be made. The first of these is the relocation of the Central Artery southbound ramp from High Street to Purchase Street. This is expected to be done in conjunction with the first phase of the International Place development project.

Concurrent with ramp relocation, the direction of High Street is expected to be reversed from one-way westbound to one-way eastbound. Together these improvements will enhance the site circulation without adversely affecting site accessibility.

The third improvement anticipated in the short-term is the reconstruction/relocation of the Northern Avenue Bridge. The existing bridge will be abandoned and a new bridge constructed on an alignment west of the existing bridge. While not affecting site access or circulation, the project will significantly improve an existing congestion point-the Atlantic Avenue/Northern Avenue intersection-and provide improved access to the Fort Point Channel development area.

Short-Term Parking Improvements

Two parking system improvements are currently planned for the area. The first is the construction of a 1,400+ space parking facility at Post Office Square on the site of the existing garage. The existing three-level garage will be demolished and replaced with a completely underground facility. At street level, the area currently occupied by the garage will become a park. This improvement will add 500 spaces to the public supply.

A second public parking improvement proposed for the area is the construction of a 500-space parking garage at the new South Station Transportation Center. This will be the first phase of a potential 2,500-to 3,000-space parking facility. The parking levels will be located above the track terminal area and will be provided with direct access ramps to and from the Mass. Turnpike and Southeast Expressway.

Long-Range Transportation Improvements

The timing and probability of implementation of long-range transportation improvements is far less certain than the short-term plan. The depression of the Central Artery and construction of a new harbor tunnel, the largest single roadway improvement project ever undertaken in the State, is planned for downtown. The fate of the project is now in the hands of Congress, which must approve the nearly 2.5 billion dollars in construction funds necessary to complete the project. At this point, any one of three outcomes is possible:

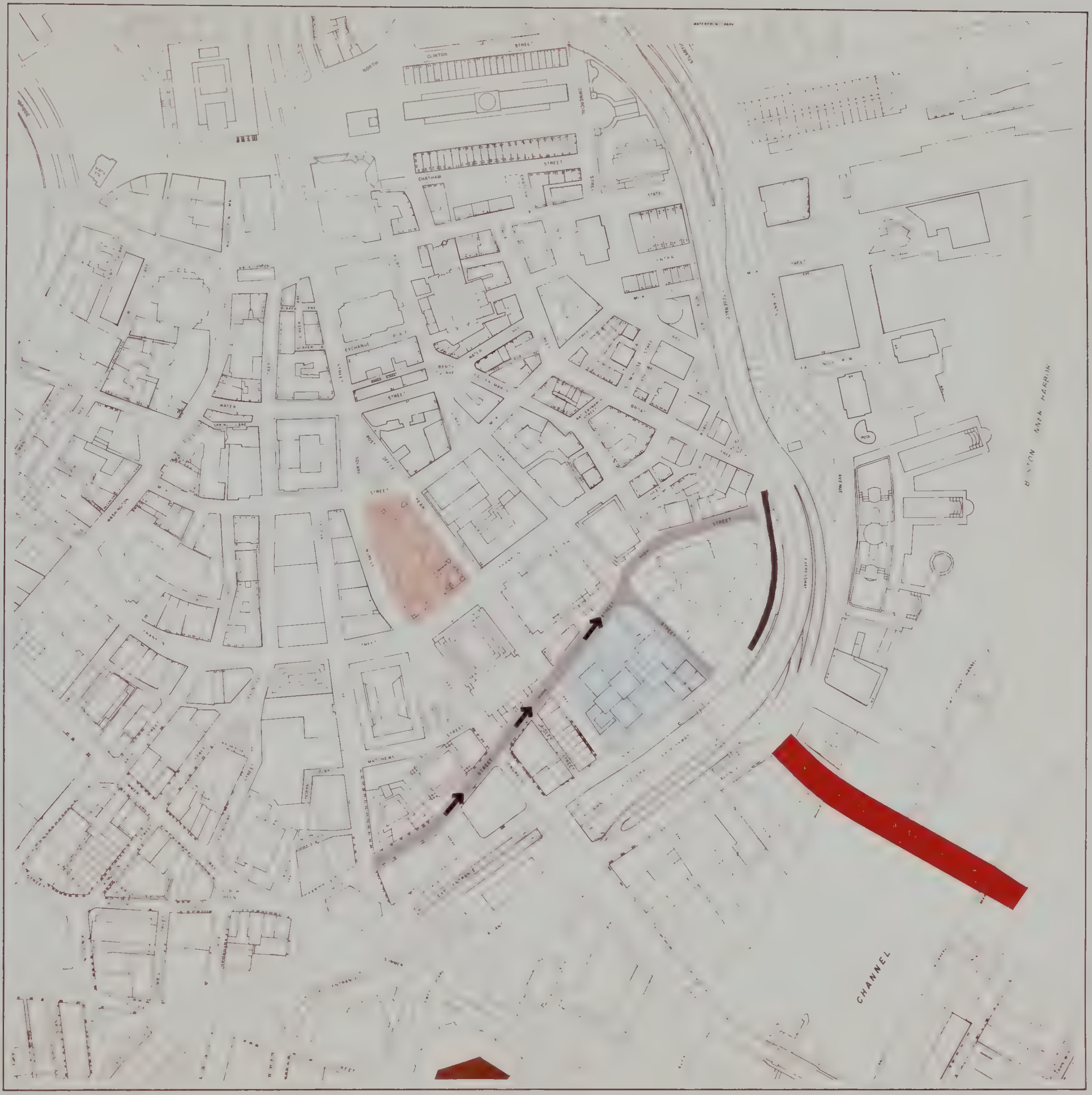
no funding approval-the project is officially stopped
funding approval-the project proceeds through the design phase, or
partial funding approval for the tunnel portion of the project.

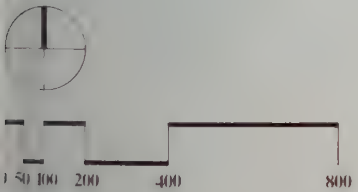
If funding is approved, some construction activity must start by fall of 1986 to remain eligible for the Interstate Highway Funding Program.

The alignment of the depressed artery will generally follow the alignment of the elevated artery; however, there will be some major changes in travel patterns. The existing South Station tunnel will be constructed along the Fort Point Channel and rejoin the existing artery alignment

Planned Transportation Improvements

- ▨ High Street flow reversed
- ■ High Street off-ramp relocated
- □ Parking garage expansion adds 500± spaces
- ■ Parking garage construction adds 500-2500 spaces
- 🟥 Northern Avenue Bridge relocation and intersection improvements
- □ Site


CLINTON
STREET
CHATHAM
EXCHANGE
STREET
HIGH
CHANNEL


0 50 100 200 400 800

near High Street. There will be no High Street off-ramp from the new northbound artery. Consequently, access to the local street system surrounding the site from the south and west will be altered.

With respect to the downtown parking system several long-range policy changes have been recommended regarding the City's parking system. These policies are focused on increasing the overall parking supply by raising the current freeze limit, while simultaneously providing better management of the available supply and reducing overall parking demands.

Transportation Analysis

Site Accessibility

The development site enjoys excellent access to and from the regional highway network. On- and off- ramps to the Central Artery both northbound and southbound are within one block of the site located at High Street and Congress Street. Consequently, traffic generated by the proposed parking facility will impact only a small number of local street intersections.

The specific local circulation pattern will depend on the location of the garage access/egress portal. There are several potential alternative access configurations which should be considered. While Purchase Street would appear to be the most desirable location for vehicular access/egress, the anticipated heavy traffic volumes on Purchase Street and queuing from the traffic signal at Congress Street will restrict the operation of a driveway at this location. A second alternative would be to provide access from Pearl Street and egress onto Oliver Street. This option would remedy the congestion problem on Purchase Street and be highly compatible with the area's long-range transportation plan; however, it is not possible to accomplish from a project phasing perspective. The final alternative location for site access is Oliver Street. This location leaves High Street free as a pedestrian corridor.

Site circulation patterns for the existing, short-term and long-range roadway configurations, assuming Oliver Street access, are presented in the figures entitled Existing Vehicular Access and Future Vehicular Access. As shown on the figures, four major intersections

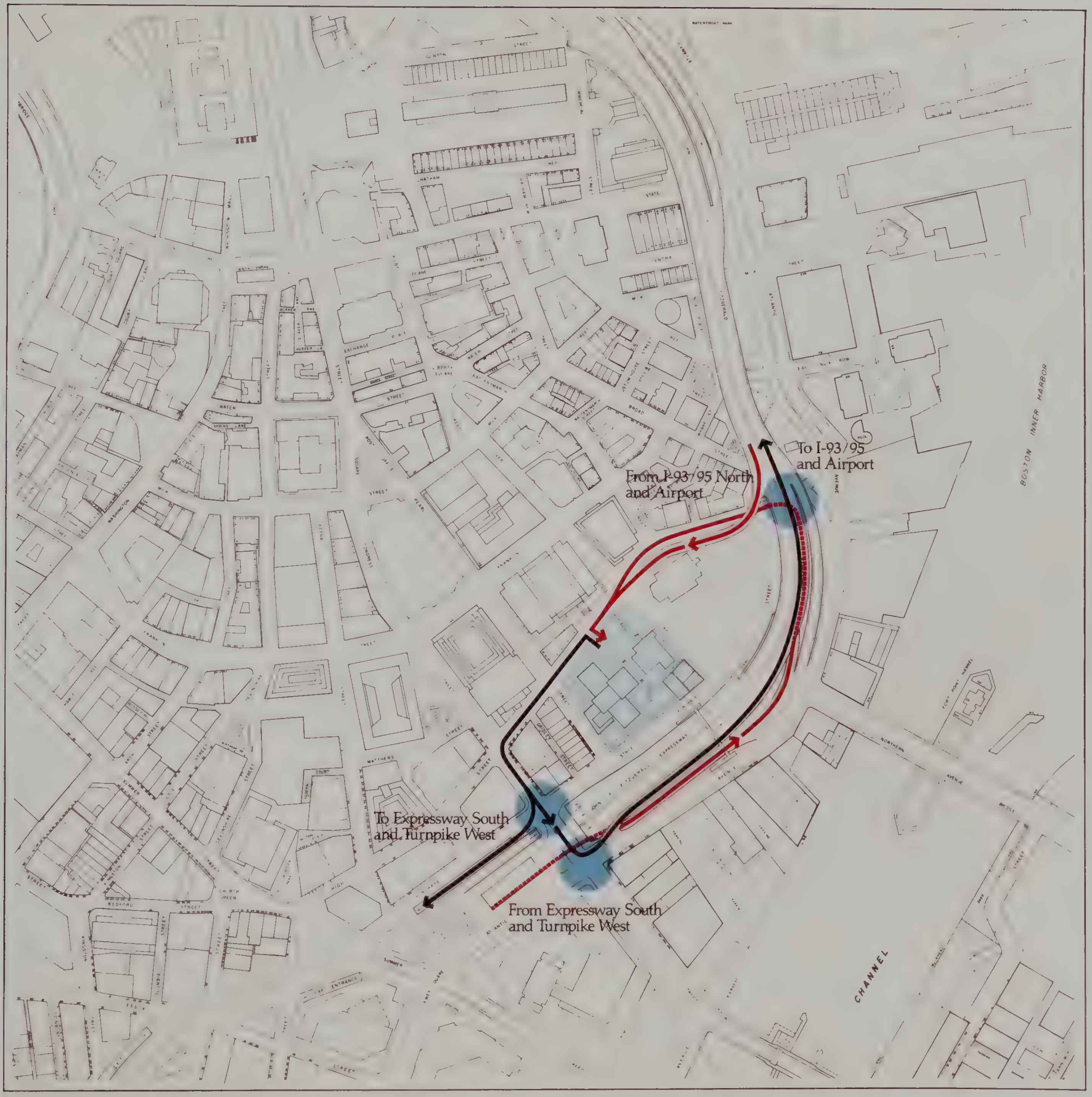
Existing Vehicular Access

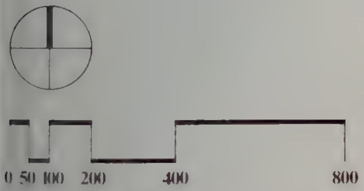
— Access Flow

— Egress Flow

● Critical Intersections

☐ Site


To I-93/95 and Airport
From I-93/95 North and Airport
To Expressway South and Turnpike West
From Expressway South and Turnpike West
BOSTON INNER HARBOR
CHANNEL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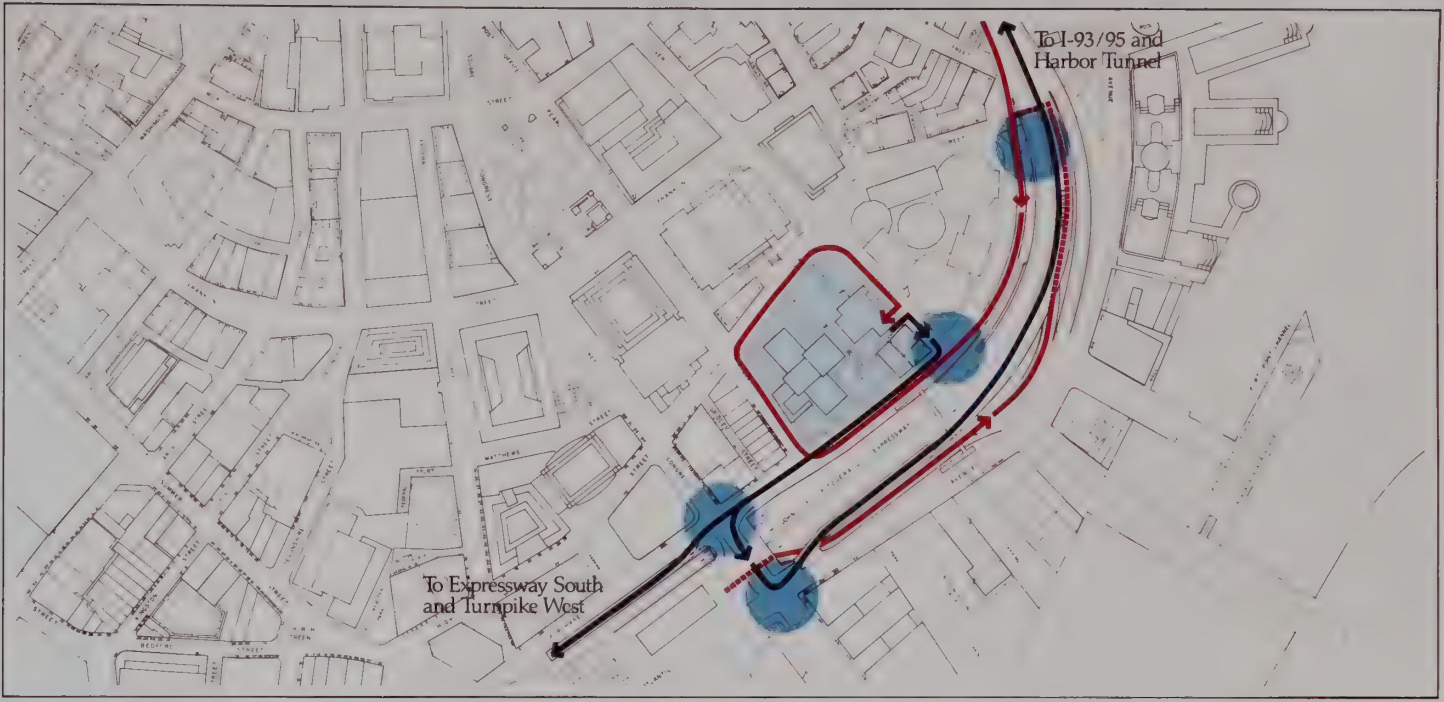
Future Vehicular Traffic

🟦 Critical Intersections

☐ Site

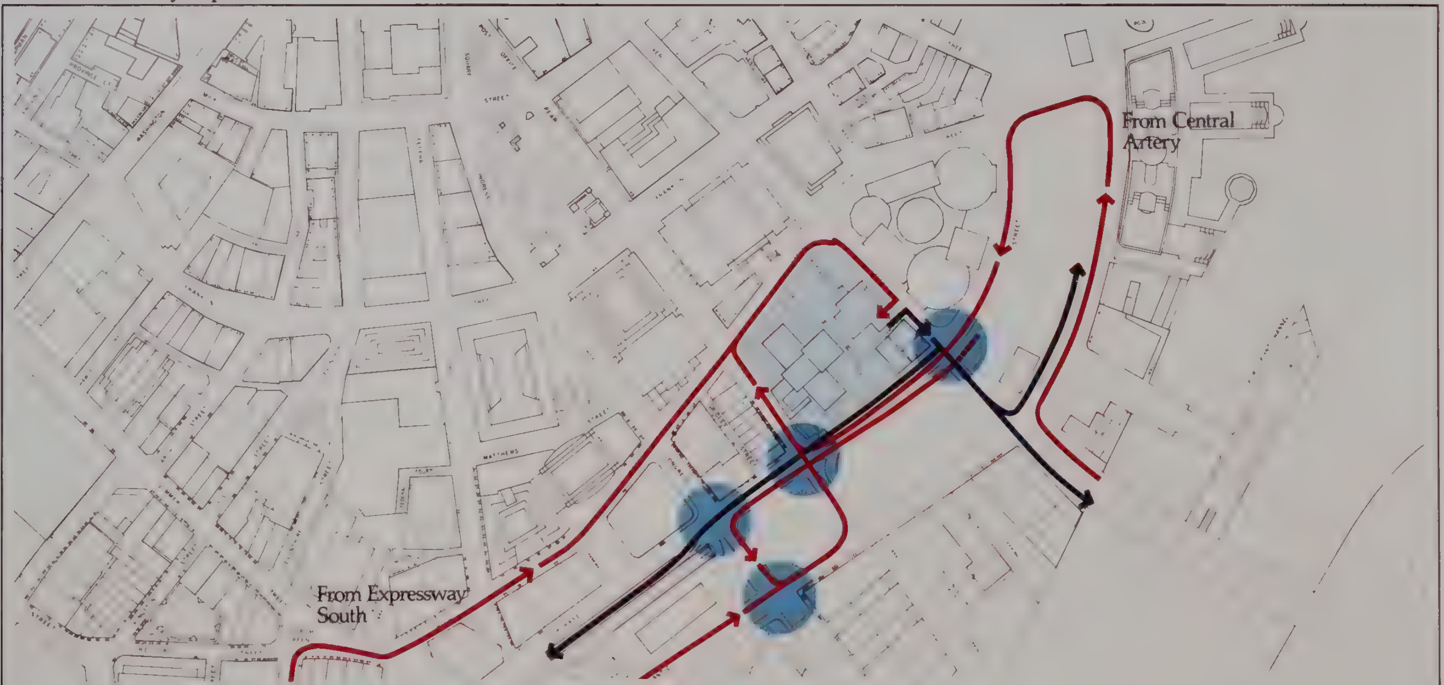
— Access Flow

— Egress Flow


To I-93/95 and Harbor Tunnel
To Expressway South and Turnpike West

Without Central Artery Depression

With Central Artery Depression


From Central Artery
From Expressway South

on the local street system will be most significantly affected by traffic originating at or destined for the site under the existing and potential short-term roadway network. These are:

Congress Street at High Street
Congress Street at Purchase Street
Congress Street at Atlantic Avenue, and
Atlantic Avenue/Purchase Street/
   High Street

Under the Central Artery Depression option several additional local intersections may be used by site traffic. Traffic from the south and west can be expected to use either the Summer Street/Atlantic Avenue or Lincoln Street/Surface Artery intersections to access the site due to the removal of the northbound Central Artery off-ramp to High Street.

Similarly, traffic wishing to use the Cross Harbor tunnels would likely pass through the newly created Oliver Street/Atlantic Avenue/Northern Avenue intersection as well as the Oliver Street/Purchase Street intersection.

Traffic and Parking Impacts

The project, when completed, could generate a peak parking demand of approximately 800 spaces. These spaces would, in turn, generate approximately 450 vehicle trips during the morning and evening commuter hours. Not all of these trips would be new, since the site is currently occupied by a 350,000 + square foot office building. Further reduction of vehicle-trip estimates is warranted as the major new project tenant - The New England Telephone Company - will be consolidating other locations not adding to the transportation system demand.

Regardless of the actual number of vehicle trips generated by the project, the local street system impacts will depend primarily on the location and number of parking spaces provided. If a large number of new parking spaces are provided at the site, then the local traffic impacts are going to be significant at the key intersections surrounding the site. Because of the site's excellent accessibility to the regional highway system, the number of local street intersections impacted will be limited.

Transportation Assessment

Public Transportation Impacts

The extent of project impacts on the public transportation system will also depend in large part on parking availability in the downtown. Assuming commuting patterns typical of the Financial District were to continue into the future, the project would generate an estimated 2,000 peak hour transit system riders. These riders would be spread over the express bus, commuter rail and subway lines serving the area.

Of greatest concern are the impacts on the several subway lines servicing downtown, since their capacities are fixed by attainable line headways. Based on a recent study of the transit system, it is expected that 70 percent of the project transit trips will be made by subway. The most heavily used lines will be the Red and Orange Lines servicing the south, southwest, north and northwest inner suburbs. Nearly half of the estimated peak hour transit system riders will use these two lines. Major improvements planned over the next five years should provide sufficient capacity to accommodate the additional riders; however, ridership levels on the Red Line to the South Shore will begin approaching capacity once again by 1990. All other lines should have ample capacity to absorb the expected elements.

Summary of Findings

The preliminary transportation assessment of the development site has been conducted to review the operation of the transportation system serving the site and identify issues and constraints which might affect the development program. The analysis revealed the following:

Regional Accessibility

The site has excellent accessibility to both the regional highway and public transportation networks. Highway on-/off-ramps are located within one to two blocks of the site while all major transit lines are within 1,500-foot walking distance.

Local Traffic Circulation

Circulation on the local street system is good. However several key intersections surrounding the site are operating at or near capacity during commuter peak periods.

Planned Highway Improvements

Improvements planned for the area highway network will generally improve local street circulation without adversely affecting regional access.

Transportation Assessment

Parking

Commuter parking is currently in short supply and significant shortages are expected in the Financial District by 1990.

Project Impacts

The project will generate some new traffic and parking demands. The magnitude of the impacts will depend primarily on the amount and location of parking provided by the site. A large concentration of parking on the site (i.e., 1,000 + spaces) could create significant adverse local traffic impacts. A more moderate amount of parking (i.e., 800 spaces) will generate more manageable local impacts but will add to the expected areawide parking shortage and may impact the public transit system to a greater extent

Future Development Assumptions

It should be emphasized that the results of this analysis are based upon assumptions concerning future development in the Financial District and Fort Point Channel Area.

Recommendations

Based on the results of the analysis, the following actions are recommended:

Vehicular access should be provided from Oliver Street. The drive design should be compatible with traffic flowing in either direction on High Street. A three-lane entrance/exit channel should be provided such that two lanes can be used in the peak flow direction (i.e., two in-bound channels in the morning).

Parking on site should be limited to what is necessary to market the building successfully. A facility in the range of 800 vehicles would produce peak hour traffic impacts which are manageable through minor traffic control improvments and modifications to traffic control improvements and modifications to traditional commuting patterns.

Early consideration should be given to developing a project access plan which incorporates strategies to reduce drive-alone commuting (i.e., ridesharing and public transit use incentives).

Preliminary Environmental Survey

Preliminary Environmental Survey

Scope

This report documents the following eight activities:

Compiling a bibliography of EIRs and ENFs for other developments in the immediate area.

A survey of potential for archaeological sites on or near the development parcel,

A preliminary survey of historic resources (and issues) that may affect the development,

A listing of publicly available shadow studies compiled for projects in the immediate area of the site,

A discussion of air quality/parking freezê issues that could affect project development,

A listing of publicly available wind studies and their significance to the project,

A discussion of potential noise and vibration issues relevant to the project and a listing of available noise data, and

An analysis of sewer issues and a description of sewer facilities at the site boundaries.

Bibliography Of Environmental Impact Reports (EIRs) and Environmental Notification Forms (ENFs)

HMM has done a survey of EIRs and ENFs for commercial developments in the immediate area over the past four to five years. The attached list identifies five EIRs and six ENFs. With the list is a project number for each document. On the following page there is a map (Figure 1) with the location of each of these eleven projects and more. We looked at no projects across Fort Point Channel, north of Quincy Market, or west of Summer Street.

In our opinion, the Rowes Wharf EIR and the FEIR for International Place are the most relevant of the documents.

Area EIR's (last 5 years)

1. Devonshire Towers, HMM, 1979
2. One Financial Center, HMM, 1980
3. Marketplace Center, J. Sullivan 1983
4. Rowes-Fosters Wharf, S.O.M., 1985
5. Fort Hill Square, HMM, 1984 (BRA version and MEPA version)

ENF

6. 53 State Street (Exchange Place), ERT, 1981
7. Kennedy's Building, HMM, 1984
8. 260 Franklin Street
9. 265 Franklin Street
10. 150 Federal Street (Meredith & Grew), HMM, 1984
11. 101 Federal (Himmel/MKDG), HMM, unpublished

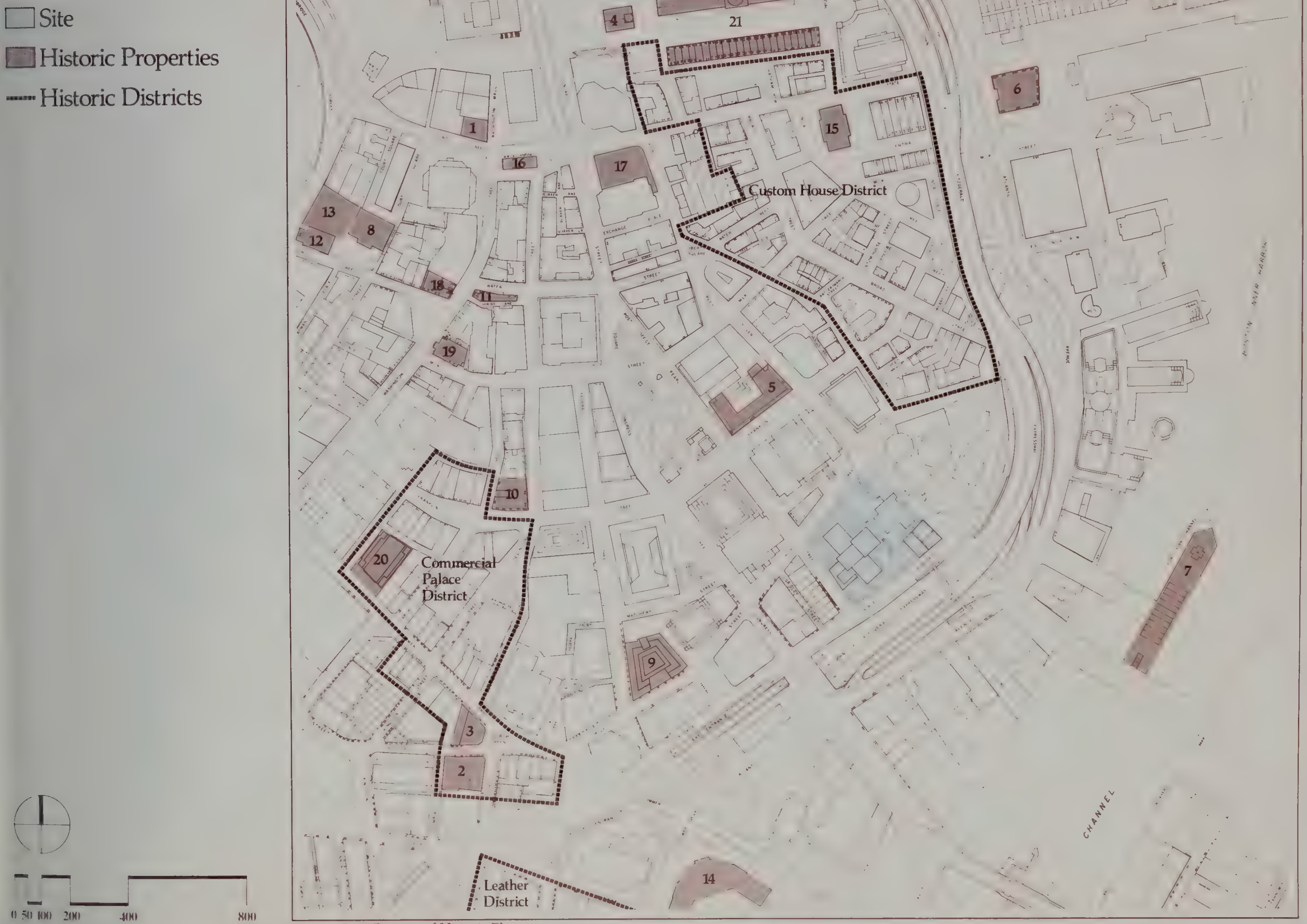
Archaeological Sites

The Massachusetts Historic Commission lists no archaeological sites near the project site. The nearest zones shown on the MHC map center around the old Globe building site (now the Devonshire) and the Faneuil Hall Marketplace vicinity. Archaeology should not be an issue.

Historic Resources

As shown on the attached map, the site does not encompass or abut any properties on the National Register of Historic Places. Furthermore, no properties listed in the State Register or by

Historic Resources


☐ Site
▨ Historic Properties
┅ Historic Districts
Blackstone Block
21
4
1
16
17
15
6
Custom House District
13
12
8
18
11
19
5
10
20
Commercial Palace District
9
7
3
2
14
Leather District
CHANNEL
0 50 100 200 400 800

Source: State Register of Historic Places

the Boston Landmarks Commission are within the site boundaries.

Key to Historic Properties

1. Ames Building
2. Bedford Building
3. Church Green
4. Faneuil Hall
5. Federal Reserve Bank Building
6. Long Wharf and Custom House Block
7. Northern Avenue Bridge
8. Old City Hall
9. United Shoe Machinery Corporation Building
10. Wigglesworth Building
11. Winthrop Building
12. King's Chapel
13. King's Chapel Burying Ground
14. South Station Headhouse
15. United States Custom House
16. Old State House
17. Stock Exchange Building
18. Old Corner Bookstore
19. Old South Meeting House
20. Kennedy's Building
21. Quincy Market

Shadow Studies

The attached list outlines shadow studies that have been prepared over the last several years.

The shadow diagram which follows illustrates existing shadows at 12:00 noon on November first.

Recent Studies*

1. Devonshire Towers, Steffian Bradley Assoc, 1979
2. One Financial Center (Dewey Sq.), Jung/Brannen, 1980
3. Marketplace Center, WZMH, 1983
4. Rowes-Fosters Wharf, S.O.M., 1983
5. Fort Hill Square (International Place), HMM, 1984
6. 53 State Street (Exchange Place), WZMH Architects, 1981 or 1982
7. Kennedy's Building, HMM, 1984
8. 260 Franklin Street, Stubbins Assoc, 1984
9. 265 Franklin Street, Goody & Clancy, 1981
10. 150 Federal Street, HMM, 1984
11. 101 Federal Street, HMM, 1984
12. 60 State Street, S.O.M., 1974
13. Lafayette Place, 1978
14. One Post Office Square, Jung/Brannen, 1982
15. 99 Franklin Street, Goody & Clancy, 1984

Air Quality and Parking Freeze Issues

Any fossil fuel utilization facility exceeding 3,000,000 BTU input capacity requires a permit from the Department of Environmental Quality Engineering (DEQE) under 310 CMR 7.02(4).

Vehicular Emissions

For projects subject to MEPA jurisdiction on traffic matters, indirect source analyses are often required in an EIR, if air quality is within the jurisdiction of MEPA.

Parking Freeze

Parking freeze regulations establish a "freeze" as of October 15, 1973 on the construction of new commercial parking facilities in the downtown area of Boston, including the site. In order to modify or construct new commercial parking facilities a Parking Freeze Permit must be obtained from the Boston Air Pollution Control Commission. The permit can be issued only if an equivalent number of off-street or legal on-street spaces have been eliminated elsewhere in the freeze area.

It should be noted that the freeze applies only to commercial spaces where cars are temporarily parked for a fee. Residential spaces are exempt from the freeze. Likewise spaces which are for the exclusive use of the lessees, employees and clients, and are not available for the use of the general public at any time, are exempt.

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*Source: Dick Mertens, HMM Associates

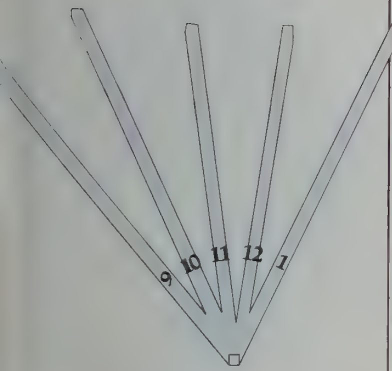
Existing Shadows

November 1, 12:00 Noon

▨ Shadows from proposed and existing buildings

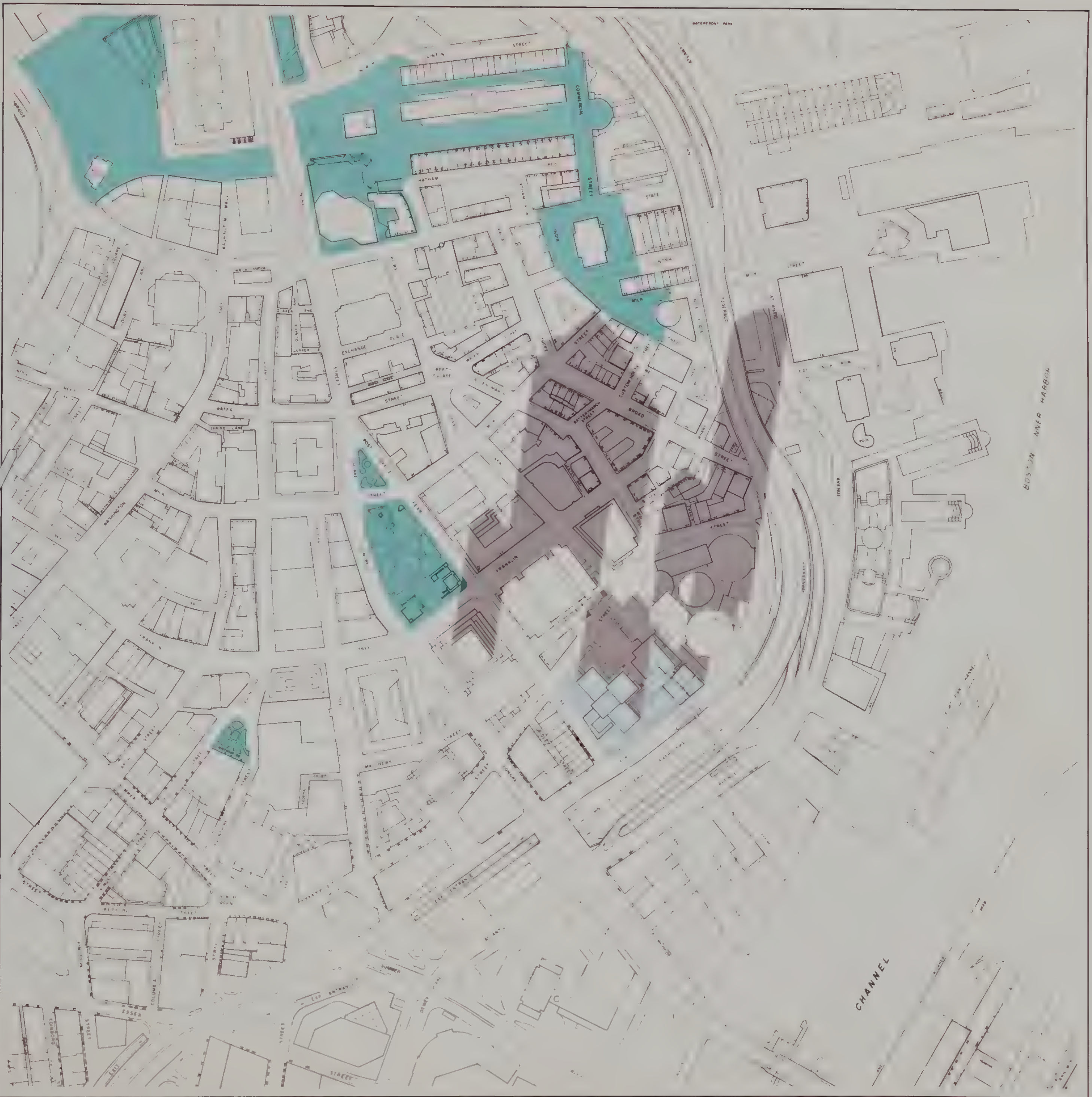
🟦 Shadow sensitive land use areas

☐ Site



ey to sun's arc and length, based on 500 foot tall building

0 100 200 400 800


WATERFRONT PARK
COMMERCIAL STREET
STATE
INDIA
MILK
EXCHANGE PLACE
WATER
SPRING LANE
WASHINGTON
FRANKLIN
BROAD
CUSTOM HOUSE
STREET
SUMMER
ESSEX
BOSTON INNER HARBOR
CHANNEL

Preliminary Envirnomental Survey

Wind Analysis

The following list enumerates the wind studies that have been identified. The wind tunnel testing that has been done for International Place indicates areas adjacent to the site where future wind levels approach or exceed the suggested BRA design criterion for pedestrian level winds*. This information is depicted on the attached figure.

Recent Studies

1. Devonshire Towers, MIT, 1979
2. One Financial Center, U. of Ontario, 1980
3. Marketplace Center, Ontario, 1983
4. Rowes-Foster Wharf, MIT, 1984
5. Fort Hill Square, Cermak & Peterka/Colorado State, 1984
6. 53 State Street, BBN (Dick Hayden), 1982
7. Kennedy's Building, Pending (Dick Hayden/HMM)
8. 260 Franklin Street, Dick Hayden, 1984
9. 265 Franklin Street, Good & Clancy, 1981
10. 150 Federal Street, Pending (Dick Hayden/HMM)
11. 101 Federal Street, Pending (Dick Hayden/HMM)
12. 60 State Street, Mt. Auburn Research Assoc. (Dick Hayden), 1974
13. Lafayette Place, MIT, 1978
14. One Post Office Square,
15. 99 Summer Street, Dick Hayden, 1984
16. Federal Reserve, W. Ontario

Noise and Vibration

No significant issue should develop since the area is generally noisy, with the expressway adjacent to the site.

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*Current BRA guidelines indicate 31 mph as a maximum acceptable wind gust velocity.

Local Area Wind Speeds*

● 31 MPH and over: equal to or above BRA design guidelines.

● 25 to 30 MPH: within 20% of BRA design guidelines.

● Below 25 MPH: well below BRA design guidelines.

* Gust speed exceeded 1% of the time with International Place completed, MPH. Sources: International Place at Fort Hill Square Environmental Impact Report, May 1984.

0
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40
80
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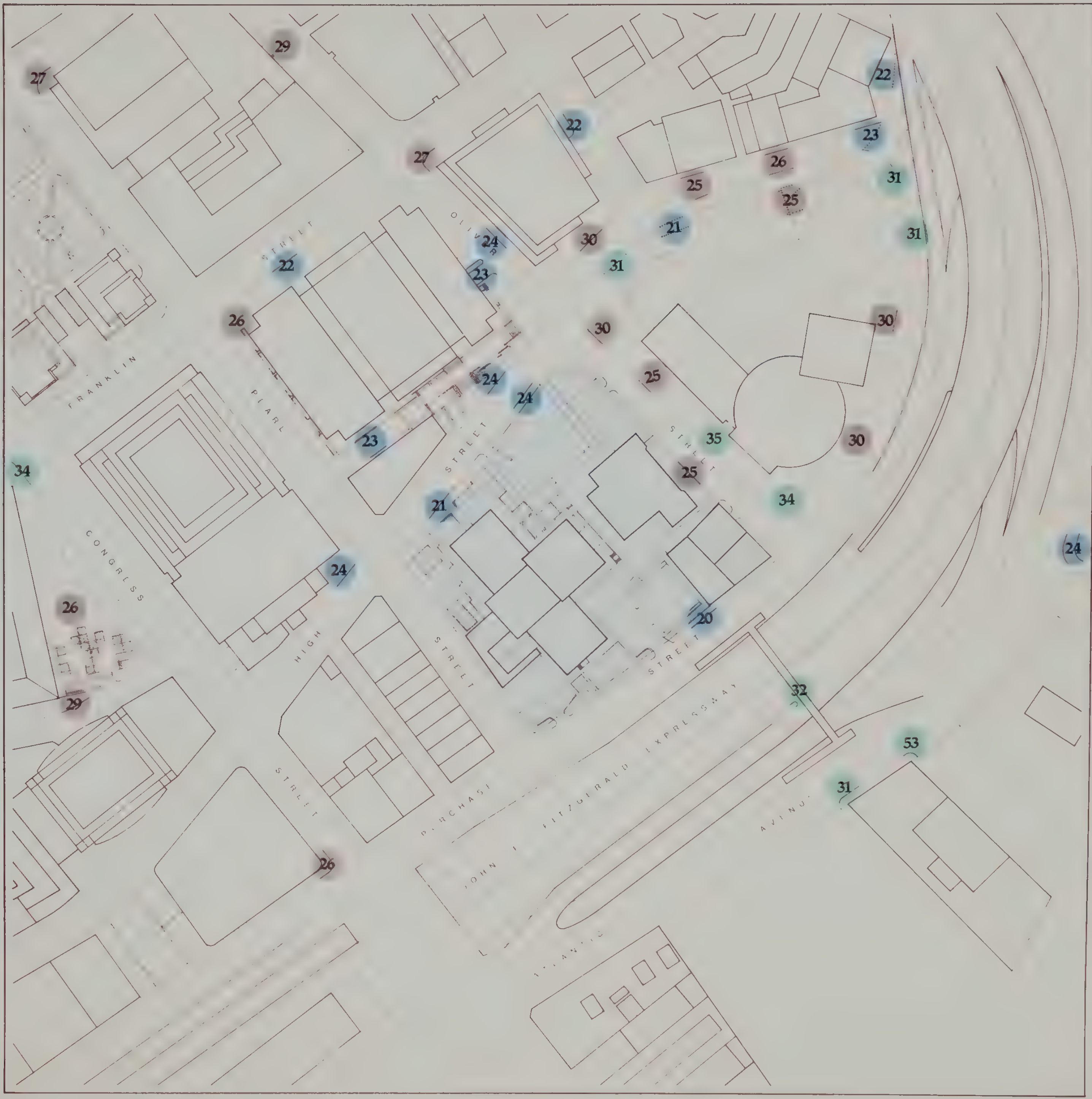
320


FRANKLIN
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STREET
OLIVER
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CONGRESS
HIGH
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STREET
PURCHASE
STREET
JOHN F. FITZGERALD EXPRESSWAY
AVENUE
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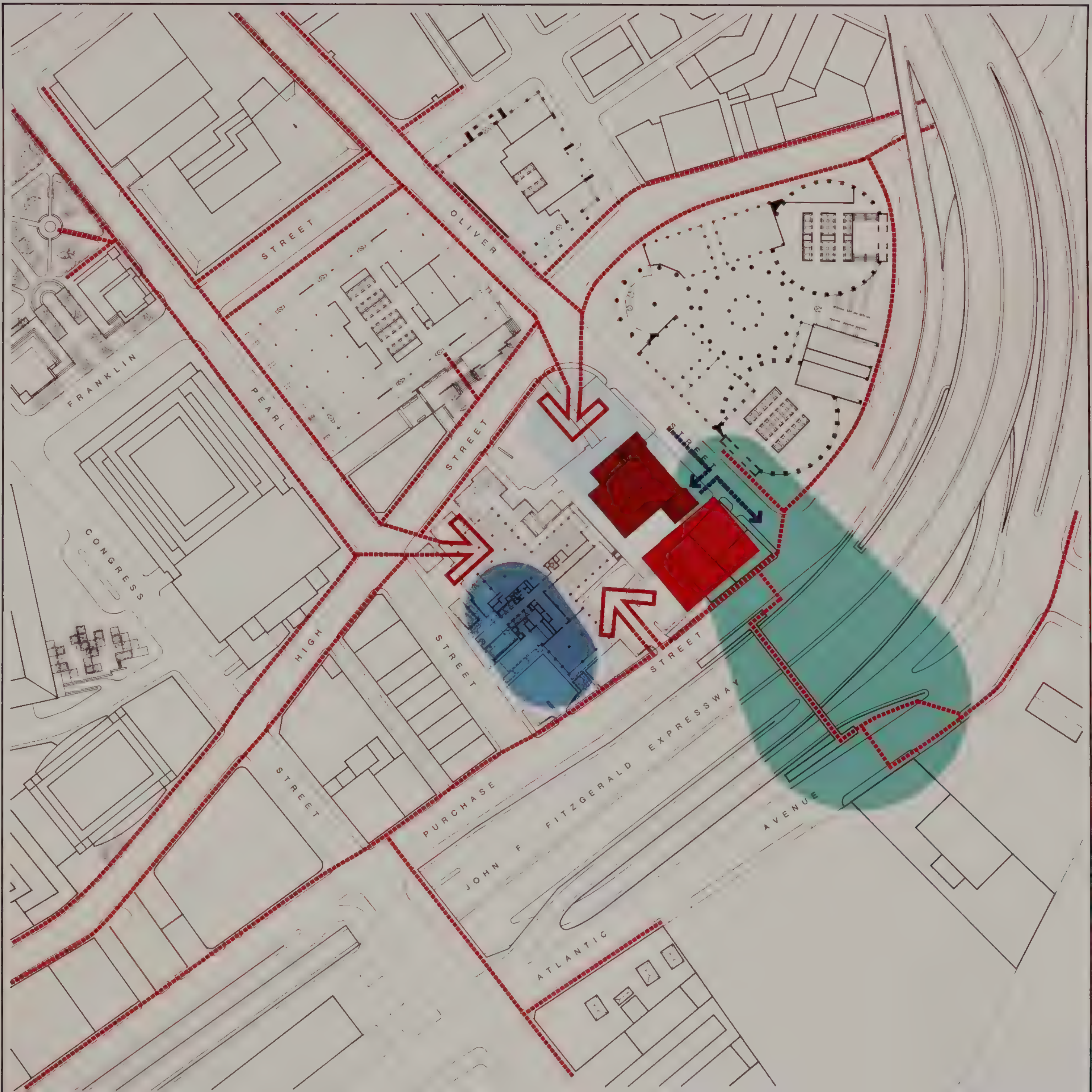
Urban Design Guidelines

- 🟩 Critical Wind Levels
- ☐ Preferred Location of Phase I
- 🟦 Preferred Location of Phase II
- 🟥 Existing Fire Station
- 🟥 Future Fire Station
- ┅ Pedestrian Circulation System
- ┅ Vehicular Access/Egress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